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National Commission on New Technological Uses of Copyrighted Works, Washington, D.C.

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NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS (CONTU)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Law School Building

UCLA

Los Angeles, California

Thursday, January 12, 1978

10:00 O'Clock A.M.

Friday, January 13, 1978

9:30 O'Clock A.M.

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Transcript of Commission meeting held in Los Angeles, California, on January 12 and 13, 1978. Mr. Roger Borovoy, Vice President, General Counsel and Secretary of INTEL Corporation, testified on copyright protection for computer software; the Commissioners heard summaries of current progress on Subcommittee Reports from members of the Staff.

Material on photocopying for corporate, special, and medical librarians has been included in the transcript at the request of the Association of American Publishers, the Special Libraries Association, and the Medical Library Association, respectively.

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APPEARANCES:

Honorable Stanley H. Fuld, Chairman

Honorable Melville B. Nimmer, Vice Chairman

Honorable George D. Cary, Commissioner

Honorable Rhoda H. Karpatkin, Commissioner

Honorable Dan Lacy, Commissioner

Honorable Arthur R. Miller, Commissioner

Honorable Gabriel E. Perle, Commissioner

Honorable Hershel B. Sarbin, Commissioner

Honorable Robert Wedgeworth, Commissioner

Mr. Edmund Applebaum, representing the Librarian of Congress

CONTU STAFF:

Arthur J. Levine, Executive Director

Robert W. Frase, Assistant Executive Director, Economist

Michael S. Keplinger, Assistant Executive Director, Senior Attorney

Jeffrey L. Squires, Staff Attorney

Christopher Meyer, Staff Attorney

David Peyton, Policy Analyst

Dolores K. Dougherty, Administrative Officer

Patricia T. Barber, Librarian Analyst

ALSO PRESENT:

Roger S. Borovoy, Vice President
General Counsel & Secretary
INTEL Corporation

CHAIRMAN FULD: May I call to order the 19th meeting of CONTU, held today and tomorrow at the UCLA Law School.

Before we hear the witness that we have, Mr. Levine will make a few remarks.

MR. LEVINE: I was hoping that during the course of the meetings we could focus discussion on three of the substantive areas that we are dealing with in our final report: the data base issue; the software issue; and the photocopying issue.

The Photocopy Subcommittee met yesterday, and we will have a report from that subcommittee tomorrow morning. Today, I would hope that after our witness, we could discuss at least the reaction of the Commissioners. We know certainly how the subcommittee members are thinking, but I think the staff would like some direction now so that we can begin considering whether the recommendations of the Subcommittee will form the basis for the final report.

Commissioner Hersey, unfortunately, is ill and won't be at the meeting. He has asked that no definite position on computer software be taken by the Commission until he has had another opportunity to discuss his position with the full Commission. He did dictate to the staff, on Tuesday afternoon, a statement which he had mailed, but which never arrived. That's being handed out now. Perhaps between now and the afternoon session, you will have an opportunity to look that over.

As I mentioned, I think it will be useful to the

staff, if we have some idea of whether --

CHAIRMAN FULD: Agreement.

MR. LEVINE: Yesh whether there is agreement, whether some Commissioners think that the Subcommittee reports are way off base, if there is additional information that the Commissioners feel that the staff should be bringing to the attention of the Commission.

That's how I would hope that the course of the meeting would go.

I apologize to the Commission for the fact that we did not get out a piece of paper that told you exactly what time this meeting started. Well, we will start today at 10:00 a.m. We will begin tomorrow morning at 9:30 a.m. Well, we will start at 10:15 a.m., and we will start tomorrow morning at 9:30. I think that's about it. That's all I have to say.

COMMISSIONER NIMMER: I just wanted to invite you all to wine and cheese at our house when we adjourn today, whenever that may be. You will have to take that sight unseen. This is all of you. I mean the Commission staff, our witness, and our -- those observers are all invited.

CHAIRMAN FULD: We only have one witness for this session. He is Roger Borovoy, Vice President, General Counsel & Secretary of INTEL Corporation of Santa Clara, California.

INTEL is one of the largest manufacturers of integrated circuit chips used in computers and other

computerized devices.

We are delighted to have you Mr. Borovoy.

MR. BOROVOY: I am going to pass out something that was recently in the IEEE Spectrum,* (a monthly publication) which is one of the better, and simpler outlines of semiconductor manufacturing processes, and is relatively nontechnical.

CHAIRMAN FULD: What do you mean by "relatively"?

MR. BOROVOY: It doesn't get into any detail. It sort of shows you the processes which we use -- I will start out by explaining briefly so we understand the problem that we have.

PRESIDENT FULD: That's relatively nontechnical.

MR. BOROVOY: As nontechnical as I've seen.

COMMISSIONER CARY: You think even lawyers can understand it?

MR. BOROVOY: Maybe even patent lawyers.

The semiconductor manufacturing process, if you go back to Genesis, starts from sand or the equivalent, but I need not go back that far for the purposes of discussion.

What it really starts with is a mixture, a liquid heated mixture, of a silicon material which is pulled in the form of a crystal, and if any of you recall your science classes in grammar school, you'd watch crystals grow, from ice where you have very cold water and you put a seed crystal in and it freezes. Well, the same process goes on in crystallization

* Roger Allan, "Semiconductors: toeing the (microfine) line." IEEE Spectrum, Vol. 14, no. 12 (December 1977), pp. 34-40.

of solid state material which is silicon, a chemical element in nature most prevalent in sand. When you pull this crystal, it comes out in the shape of a salami, very pure, and cylindrical. You slice off the ends because it comes to a point at one end.

You slice it, as shown in this picture in the second line, into very thin--microscopic--slices which are very delicate and breakable. These are finished wafers.

More steps have gone in but the raw slice looks exactly like that, and as the technology is improved -- originally these were made in the Bell Laboratories in the mid-fifties, early fifties, in about half inch diameter slices.

We have now expanded the technology and the ability to grow these and handle them so we now -- the state of the art is -- they are breakable -- the state of the art is 100 millimeter or approximately four-inch diameter wafers, as we convert to the metric system. They are going to be 100 millimeter diameter wafers. The more of them you have the more these little circuits you can get on a wafer and that decreases the manufacturing costs. As you know, with the semiconductor business, the amazing thing is that costs continue to decrease at a rate of about 30% per year. It's the United States' best industry for inflation fighting. The technology keeps improving and the cost per function goes down and down. It's gotten to the point where we make a computer -- this is a computer equally complex as the UNIVAC's

original computer, or ENIAC, which used the vacuum tube technology of about 30 years ago.

This is equally powerful, on this one chip in the one package, as the original ENIAC computer. So the technology has made great strides and is continuing to do so.

CHAIRMAN FULD: How long does the material last?

MR. BOROVOY: Well, as long as we know, there is no --

CHAIRMAN FULD: I mean the content of it.

MR. BOROVOY: What do you mean by the content? You mean this chip?

CHAIRMAN FULD: Yes.

MR. BOROVOY: How long would it continue to function?

CHAIRMAN FULD: Yes.

MR. BOROVOY: There is no reason to think it will ever quit. It has a lot of advantages over vacuum tubes which used heat and have tungsten filaments or some material filament which eventually burned out. This will never burn out.

Yes, eventually, like any product, it will die but there is no specific lifetime and certainly 20 years is reasonable to expect.

COMMISSIONER CARY: Excuse me, is that something like what we have in these pocket calculators?

MR. BOROVOY: Yes.

The various complexities of semiconductors go from the pocket calculator, which is a chip similar to this but not as complex. This is a micro-computer chip, because

this has memory in it. Some of the calculator chips also have memory in them. This has more memory and is able to control various external functions, for example, micro-computers are used in appliance controls, washing machines, dishwashers --

CHAIRMAN FULD: Is it used for programs?

MR. BOROVOY: Yes. This has a capability of storing -- this will store one thousand bits of information permanently, and that is used for the program to operate the computer. So, it knows when it gets a signal from a certain part of the oven and that that's the temperature signal and it measures whether it is within certain limits and if it is, it either turns off the oven or turns on the oven or regulates the signals coming out in terms of LED display on your microwave oven which gives a temperature or time or any function that the housewife needs to control the oven, this will be displayed and the chip will also control the oven automatically.

Microwave ovens have turned out to be one of the largest users, so far, of mass produced micro-computer chips, but it will be absolutely dwarfed in the next three or four years by automobiles.

It is expected in 1980 that there will be three or four of these in an automobile.

CHAIRMAN FULD: To do what?

MR. BOROVOY: Well, the main thing is to control the fuel usage, to control the carburetor or fuel injection in

order to meet the government standard requirements for mileage and emissions for the 1980's. It is essential they have at least one micro-computer and the way things look now, they're going to find they will need three or four to control different functions of the automobile. Of course, one will be to control the fuel and another in the cruise control and the speedometer. There may be another one in a braking function, another one in windshield wipers, turn signals, and maybe the same one doing both the windshield wipers and the turn signals.

COMMISSIONER KARPATKIN: Do they ever malfunction, and if so, who will repair it?

MR. BOROVOY: Well, you never repair this. As you see, it's got little pins and like anything else in a car, you pull it out and put it in.

COMMISSIONER KARPATKIN: Our local mechanic will do that?

MR. BOROVOY: I think even your local auto mechanic will be capable of pulling out one of these things and inserting another one. It's not much different from a fuse, and my feeling is they may get into modules which are easier.

As an example, if any of you have seen the Fairchild or Atari TV game, well, in the Fairchild, it looks like a tape cassette. There is no tape in there, it is one of these. It doesn't happen to be a computer, it's just a memory and you never see this. The interface is just a

little P.C. board this is on with little end connectors that plug in and out. Well, in an automobile, you can easily go into a module that you can put in and out just like a fuse. Now, a better example would be a turn signal. You can fix it yourself, if you know where it is, you can pull it out and buy another one for a dollar and a half. This will be very much the same thing.

MR. LEVINE: It will be located in a place where you will have to take the entire motor apart.

(Laughter.)

MR. BOROVOY: If the automotive industry continues their present practices, absolutely yes. If anyone's ever tried to change a spark plug in a recent model car, you know what he's talking about.

MR. KEPLINGER: May I ask a question?

MR. BOROVOY: Yes, Mike.

MR. KEPLINGER: Aren't these chips also used in many of the home computer devices?

MR. BOROVOY: Yes, absolutely.

MR. KEPLINGER: So that they are general purpose computing devices as well as used in special purposes dedicated applications?

MR. BOROVOY: Yes, maybe a different one.

We have various models, at this point, and some are more adaptable to appliance controls, others that are more adaptable to home computers, but yes, it's essentially

the same chip, same technology. It only takes one of these to be a home computer and home computers will be, certainly in the early eighties, not much more expensive, in fact, no more expensive than the present generation pocket calculators -- the HP variety which have memory and are programmable are now, I think, $200 to $300.

COMMISSIONER PERLE: When you call it a computer, does it have all of the traditional elements of a computer?

MR. BOROVOY: Yes.

COMMISSIONER PERLE: Memory and --

MR. BOROVOY: Yes, everything except the I/O device.

COMMISSIONER PERLE: I/O?

MR. BOROVOY: Input, output.

Obviously, you have to talk to it somehow and, there is no talking provision built into that chip, so, in order to tell it what to do, you have to have a typewriter or tape going into it or something, some interface with the human being in order to make it operate. This has all the functions. It has CPU. It has RAM. It has ROM. It has everything to operate as a computer, but you have to interface with it.

COMMISSIONER LACY: What are RAM and ROM?

MR. BOROVOY: RAM is Random Access Memory, which is the kind of memory, like a scratch pad. You can randomly change it any way you want. ROM is fixed memory. It is called Read Only Memory and ROM is really like a table, it looks up a bunch of "yeses" and "nos" --

COMMISSIONER LACY: I know what they are once you give me the initials.

MR. BOROVOY: Yes, you get the initials, right, RAM and ROM.

MR. APPLEBAUM: You make it sound suspiciously like a mechanical device.

MR. BOROVOY: It's not really mechanical. Nothing ever moves in this, but what the micro-computer has done is it has totally replaced what used to be done with switches and relays, with electronic switches and relays, with no moving parts. Just this week our washing machine was out of commission and the repairman said, "Your husband was an idiot to buy this washing machine. It's got too many push-buttons and they always give you trouble." With a micro-computer, you can have an infinite amount of control and never have to worry about the timer and the switches going out because there is no mechanical movement. So this will revolutionize the longevity of appliances.

MR. APPLEBAUM: But this machine doesn't have to move necessarily, the computer can sit there and hum without physical motion --

MR. BOROVOY: That's right.

MR. APPLEBAUM: -- and still be a mechanical device.

MR. BOROVOY: The ratio of switching -- ability to switch this to what is in your washing machine is almost infinite.

COMMISSIONER PERLE: Is there only one program for that particular microcomputer?

MR. BOROVOY: Oh no, this is what I might call a universal micro-computer. Every customer is going to write his own program. Now, this is --

COMMISSIONER PERLE: How?

MR. BOROVOY: Now, you asked that question, so I will give you a little bit of advertising for INTEL.

INTEL really made its reputation by developing what's called erasable programmable memory. That's EPROM, and once you program it, it's permanent. It will stay there forever, but when you find you programmed it wrong, you made a mistake, all you -- you notice that it has a glass top, actually it's quartz, all you do is put this under ultraviolet light for 15 minutes, and it forgets everything it knew in that Read Only Memory. That's why it's called erasable programmable.

Then once it's forgotten it, I plug it into a unit which will reprogram it in a new manner correcting the mistake. This particular unit, which is an expensive unit which now sells for about $60, that is used for developing -- say that you are going to use it as an appliance control -- for developing the program to use as an appliance control and making sure that -- you plug it in exactly where you want it, make sure the appliance does exactly what you want it to do, you do this by an iterative trial and error process

where you program, try, program, try, and you keep going until it works perfectly.

Then if you want to build 10,000 of them, you don't use those because they are too expensive, you buy the exact same thing but you send us your recipe. And the recipe is strictly those thousand bits of memory that you have now figured out by this iterative process.

COMMISSIONER PERLE: I the customer?

MR. BOROVOY: No, no, the company.

The customer never sees this. To him, it looks just the same as it did before except it may have more push buttons because once you have this, push buttons become cheaper and easier.

COMMISSIONER PERLE: So it is the company who is going to manufacture the machine that writes the program.

MR. BOROVOY: It writes the program. It's his software, not ours. Our software is only used -- we give him the programs with which to write the programs.

COMMISSIONER PERLE: In what form does the customer's program come back to you?

MR. BOROVOY: A truth table.

COMMISSIONER PERLE: What does that mean?

MR. BOROVOY: Two ways. The simplest way is we now tell our customers "When you finish with it, this chip, just send it to us."

He's got his program in there, his final program

is in there, he created it and it's all done, and it works. He unplugs it from his prototype. He sends it to us. He orders 10,000, and then the price goes down to $3 to $5 apiece because what we do is we don't need these fancy semiconductor materials that are more expensive that enables this to do that erasable thing. All we do is put a ROM on there which is just strictly a metal pattern.

COMMISSIONER PERLE: I am concerned with the proprietary interest in software. I would like to know how I write it and what I do.

MR. BOROVOY: All right. What the customer has from us -- buys from us, is a set of equipment called Micro-Computer Development System. It's a Micro-Computer Development System which costs, depending on how many bells and whistles you want, it's really a mini-computer, it costs about $5,000 to $20,000 and that includes disk storage and all of the things necessary in order to develop a program for this micro-computer.

This is for our customers -- for Whirlpool, Maytag, Oster -- what is the microwave oven?

Amana, yes, which is part of Raytheon.

The equipment we sell is a mini-computer which is micro-computer based. We build a lot around it. It's really the size level of a mini-computer, but its basis is a micro-computer like this. We give them assemblers, all these words you've heard, assemblers, compilers, text editors,

all the basic software for our system in order for him to use that system specifically to develop his program which will end up in one thousand bits of ROM.

Now, there are bigger bottles with two thousand bits of ROM. As customers get two thousand bits, we are getting a feedback, "Gee, this is so nice, we'd like four thousand." Of course, you get chips much bigger than this and the yield goes down in the present state of the art. Next year, they will be bigger than this with the same yield. That's the way the industry moves.

INTEL has been the leader in what is called large scale integrated circuits, LSA, and this is a state of the art example.

COMMISSIONER NIMMER: Does this indicate a merging of software and hardware that's qualitatively different from others?

MR. BOROVOY: Yes. I think that this is the first time that the customer has been so heavily involved in developing his own software.

When you went to the IBM computers -- IBM generally developed all the software even down to the mini-computers. Data General develops the software, sells it to you, you do a job with it. Now, it began to move in our direction in the mini-computer field because not only does one buy a mini-computer as a computer, but one buys it as a piece of gear that he is going to put into a larger piece of

equipment.

For example, if a company is going to make a mass spectrophotometer, now, of course, he will use a micro-computer. However, three years ago he used a mini-computer and he'd sell mass spectrophotometers by the thousands; so, he would have to buy a thousand mini-computers from DEC.

In developing his mass spectrophotometer, he may have done some of his own programs, and not just used DEC's program. But, by using DEC's programming programs, assemblers, compilers, and all those things, he developed his own program for the mass spectrophotometer. Now, that we have gone to the micro-computer, it's almost universal that the customer wants to develop his own program and develop the program for the micro-computer. Now, the ability to give him a thing like this that once he gets it done, he can buy it for $3 to $5, is a tremendous achievement in the ability to get products out quickly.

COMMISSIONER PERLE: Is it possible that there would be a market for that program chip for other people?

MR. BOROVOY: What do you mean by other people?

COMMISSIONER PERLE: I am Amana.

MR. BOROVOY: All right.

COMMISSIONER PERLE: You are General Electric. I program my little chip. Could I sell --

MR. BOROVOY: The program?

COMMISSIONER PERLE: Yes.

MR. BOROVOY: Absolutely, once you develop the program. This gets to the game example which is exactly analogous.

If Amana develops a program, which is again this thousand bit truth table, no more, no less, it resides there. That program tells the Amana microwave oven how to do all the things it is supposed to do, and somebody else may well want a license. Why should they go through the work that Amana went through to develop this program? They can take a license from Amana, but the question is what do they need the license under?

Amana is going to put these out in their ovens, GE can go into the discount house or department house, buy the microwave oven, lift this from the socket, put it on a piece of test equipment, and in a few micro-seconds the printer will get the whole truth table from the ROM.

Why should they pay Amana anything unless there is copyright protection?

COMMISSIONER PERLE: Thank you very much.

(Laughter.)

Could you tell me a little more about how the program is actually written? Is there a flow chart? Is there --

MR. BOROVOY: The program is written in the manner exactly as programs have been written since time immemorial. There is no unique differences. The basic techniques of programming are the same.

We developed our own instruction set for this, so, obviously our instruction sets are different from our competitors unless they copied the chips. It's certainly different from IBM instruction sets but the techniques of programming have not changed.

Throughout the years, I have programmed an IBM 650, an IBM 1401, an IBM 370, an INTEL 8080. The basic techniques remain exactly the same. The equipment gets better, cheaper, easier to use. The high level languages get better, but the systems don't change.

COMMISSIONER KARPATKIN: Could you recite a program such as the one you described would be ripped off, if it was not copyrighted? Could you visualize it?

MR. BOROVOY: You mean what the program does?

COMMISSIONER KARPATKIN: What it says. That which needs to be copyrighted in order to avoid ripping off.

MR. BOROVOY: Let's take a very simple example. Let's say this micro-computer is going to be programmed as a switch as an emergency switch in a smoke alarm.

When the smoke density in the room gets to a certain point, the computer has one function. It throws a switch, and the alarm rings. The program would have -- actually I could probably write that program in 10 steps but if I was in a hurry it would have taken me 30 steps -- it actually would say "Read Pin 1" and somehow Pin 1's voltage would change with the smoke. You have got to have

some sort of an interface device that translates smoke into a voltage, that's independent of the computer. The voltage on Pin 1 will increase to a certain level so what you do is, every computer cycle, which is less than a microsecond, every computer reads Pin 1. If the voltage on Pin 1 is less than five, go back to Step 1, read Pin 1 again. Then you go back to Step 1, but you have a branch. If the voltage on Pin 1 gets up to above whatever your limits are, close Switch 3, which will put a voltage on another pin which will go to some electronic mechanical device and will have it throw a switch.

Now, this is a very simple program.

COMMISSIONER KARPATKIN: And this is what we are talking about when we say it needs to be copyrighted in order not to be ripped off?

MR. BOROVOY: Well, that simple a program doesn't.

COMMISSIONER KARPATKIN: Why?

MR. BOROVOY: Because someone could reprogram it easier than ripping it off.

COMMISSIONER KARPATKIN: Well, if we wanted a lot of competition in the smoke alarm business, how many variations can there be in a set of instructions so that each manufacturer will have a programmed smoke alarm system which will work simply and effectively but will not infringe on the copyright --

MR. BOROVOY: Easy, easy. Let's look at the practicality

of this. If all you are doing is that function, I don't care if it's copyrightable or not because I'm only spending a small amount of time and money.

COMMISSIONER KARPATKIN: If it were copyrighted, then it would be a limitation into the entering of the industry of smoke alarm companies.

MR. BOROVOY: Not in this case, it would be so easy there would be no copying. They can develop their own without copying when it's that simple.

COMMISSIONER KARPATKIN: Now, you've lost me. You can copyright "My Country Tis of Thee" which is very simple and if somebody's copyrighted it, notwithstanding its simplicity, it would be an infringement.

MR. BOROVOY: Yes, all that being true, it doesn't prohibit entry into the smoke alarm business because, I can take as a given, as a general counsel for a company that I am not going to copy anybody's smoke alarm, and you can put two engineers together for an hour and they will give me another way of doing it or at least an independent way.

COMMISSIONER NIMMER: Or even if it's the same way, independently arrived at.

MR. BOROVOY: That is not a copyright infringement.

COMMISSIONER LACY: Moreover Mel, isn't it the case that there is only one sensible way of recording an idea, then you can't copyright it because that would copyright the idea which is not copyrightable?

MR. BOROVOY: Let's move for just a minute if I may to something a little more complex that sounds easy. Take the Fairchild TV game which has maze, auto race, tic-tac-toe and a host of different games, each one on a cartridge. How long does it take me to copy a cartridge? About 30 seconds. I pull it out of the plastic, put the thing on a piece of test equipment, it goes through. I have now got the truth table and of course, the instructions of the game are given and I don't have to copy that. The game is easy.

All right now, how long did it take the engineers, or whoever did it, to do it for Fairchild? To take another very good example, Parker's "Code Name Sector," new this Christmas. My son has one and it's an outstanding game. They did a lot of thinking. In fact, they got the idea from an outside source.

How are they going to prevent somebody from ripping that off? I am sure there are millions of dollars developed into that thing, that they either paid or put their own in and where does it all reside? In one little microcomputer chip in the ROM in there, which--the chip is available commercially--can be pulled out and the truth table copied. The only thing I can't use, probably, is the name "Code Name Sector" because that's theirs, but I will think up another. I don't have to copy the map because it's nothing special. I can use different coordinates. I have got a game that can do the same thing with no investment. The only possible

protection is the copyright protection on this truth table.

COMMISSIONER PERLE: You don't think it's subject to patent?

MR. BOROVOY: Oh no.

COMMISSIONER PERLE: Why not?

MR. BOROVOY: Because I am not sure, first of all, that a game fits into any of the statutory classes and even if it did, the level of invention -- well, I'll take it back. You can always get a patent on something but not a patent that would stop someone from copying the game.

You might be able to get a patent on, let's say, the way the plastic is formed around it or --

COMMISSIONER PERLE: The basic concept is not susceptible to patent.

MR. BOROVOY: It's not susceptible to patents? It's not part of the statutory forms of patent protection.

I suppose it's an article of manufacture, but these conceptual ideas don't lend themselves to patent protection. So, that's why the smoke detector is easy, but my catch here today is the industry gets more and more complex. That's why we need protection, whereas we didn't need it years ago.

COMMISSIONER KARPATKIN: If the costs of all of this production is declining each year, will its application to automobiles and appliances bring down the costs of those products?

MR. BOROVOY: It will bring down the cost and increase the reliability, but apart from bringing down the cost, it will allow functions to be performed that were not previously capable of being performed at a reasonable cost, like the fuel control. Without the micro-computer, it would have been very, very expensive to come up with advanced fuel control systems.

COMMISSIONER PERLE: Going back to programming and this whole business. The copyright law says that "Copyright protection...subsists in original works of authorship fixed in any tangible, medium of expression now known or later developed from which they can be perceived, reproduced, or otherwise communicated either directly or with the aid of a machine or device."

Now, parts of this Commission, sometimes all of this Commission, has had a tremendous amount of difficulty in regarding things which are things, rather than what's generally regarded as intellectual property as subject to copyright protection. And as we go on with technology they are going to look stranger and stranger and stranger in terms of our traditional approach to what is the subject matter of copyright. Is there any way that you can think of, of explaining to the world at large why that chip or its grandchildren or great grandchildren, and the programming that goes into it, is an original work of authorship?

MR. LEVINE: Aren't you attributing, Gabe, something

to the computers that we hope will never be the case, that they are going to be able to reproduce children and grandchildren?

COMMISSIONER PERLE: You have not seen the Demon Seed.

COMMISSIONER KARPATKIN: That will fix John Hersey.

MR. BOROVOY: Well, in my letter to the Commission, a business letter, I enclosed a copy of that cartoon from the New Yorker, that we are all going to be replaced by a computer chip, by a small piece of silicon.

In answer to your question, maybe, I don't have any trouble with the concept of this chip being a storage medium for information. I don't see why, conceptually, it's any more difficult to look at this as a storage medium than it is to look at a magnetic tape, or a punch paper tape.

COMMISSIONER PERLE: I don't either, but I want a way of expressing it. I want a way of reducing it to words if only so that those who differ with me -- we'll have something specific which can't argue either may or may not be able to respond to.

MR. BOROVOY: Once you get beyond the issue that the computer program whether it's -- however expressed -- whether it's on paper, let's take on paper. It's the easiest one. It writes down all the steps, writes down a truth table. There is no problem if you get to the concept that that truth table is copyrightable subject matter because it is the work of an author and if you are not troubled by the

fact that a computer programmer is an author, it doesn't trouble me at all. I don't know why his output is any different from someone writing a book. He has to be equally creative, and he has to be clever about the way he arranged his steps to minimize the number of steps.

It all has value. The program is original. It's going to be different from -- except for the very simple case that we talked about earlier, and in any complex case it's almost impossible for two people to come up with the same program. They are individuals. Every individual has a way of expressing himself in computer language. So, if you get beyond the point that the output of this person is copyrightable subject matter somehow, I don't get troubled by how this output is stored. There is no physical difference between storage on a magnetic tape, on film, on punch paper tape, or on silicon chips. All of these things remember only one thing, and that is yes or no. It all boils down to yes and no.

COMMISSIONER MILLER: But the difficulty that we have with this is that the other storage media generally have as one of their functions communication with the human being, the transfer of intelligence back and forth or basically to a human being. Whereas, that chip does not communicate with a human being the content of the information that it's got within it. It is designed to produce, for want of a better term, a utilitarian result, not communicate informa-

tion, not to disgorge its contents the way a phonograph record or magnetic tape does.

Does that bother you conceptually?

MR. BOROVOY: I hadn't thought of it in those terms. It's absolutely true that this chip or even -- but again, I don't think it makes a difference if we are talking about this chip or a tape. A tape that's going to run through a computer, [illegible] is not designed to divulge its contents to a human being directly.

Now, indirectly, you have got to have the human being to machine interface at some point in the chain until we get to the point that computers replace us completely.

COMMISSIONER NIMMER: Well, is it ever indirectly designed to contact a human being? That is the situation in instructions to automobiles as to how to operate. What is eventually communicated to the human being is that his car is moving.

MR. BOROVOY: Or he's out of gas.

COMMISSIONER NIMMER: But it doesn't, see?

COMMISSIONER PERLE: It's empty.

COMMISSIONER NIMMER: Well, there it is communicating.

MR. BOROVOY: Well, it will do more than that. It will tell you how many miles you have left to go at the speed you are going, at your rate of fuel usage.

COMMISSIONER NIMMER: Well, we are talking now about how the particular computer is used, but other computers in the

car do not communicate.

MR. BOROVOY: That's correct. They communicate with functions of the automobile. They communicate with the carburetor, with the exhaust, but they don't communicate with the human being.

COMMISSIONER MILLER: It's like a barometer. Your chip is like a barometer. I don't mean to demean it, but inside that barometer there is a circuit, in effect, which is designed to calibrate a variety of conditions and, yes, it does communicate information. It says 29.88.

MR. BOROVOY: Right.

COMMISSIONER MILLER: But what would be copyrightable there?

MR. BOROVOY: Well, back to my contention if a work of an author is copyrightable, does it say that a work of an author has to be communicated to human beings?

COMMISSIONER MILLER: Would you copyright the barometer?

MR. BOROVOY: No, you couldn't copyright the barometer.

COMMISSIONER MILLER: The barometer has information. It is in the form of a series of mechanisms.

MR. BOROVOY: Let's assume it is a micro-computer barometer, which is entirely possible, somebody has to do some work to come up with that program.

COMMISSIONER MILLER: And somebody had to do some work developing the mechanisms that are in that barometer.

MR. BOROVOY: All true. This is the appliance manufacturer.

COMMISSIONER MILLER: Are we going to give a copyright to that barometer maker?

MR. BOROVOY: I want to give a copyright to whomever developed that program that works in the computer to make the barometer operate. That, to me, is the work of an author irrespective of whether it communicates to human beings or not.

COMMISSIONER MILLER: Moving away from that, would you feel more comfortable if it were a different form of protection? If we didn't call it copyright? If we called it the Franum statute?

MR. BOROVOY: The only comment I had on that in my reply to Mr. Hersey's position, was that to get a new form of legislation we are looking at many, many years as we know from the Title 2 experience.

COMMISSIONER MILLER: So, you prefer it quick and dirty.

MR. BOROVOY: Yes. I'll take my chances with copyright protection rather than start from Peg 1. But, conceptually, I don't care whether it's called the Franum statute or copyright protection, if it prevents somebody from making photographic rip-offs of what is on that wall, I am happy.

COMMISSIONER PERLE: Yes. But that's a very counter-productive statement to the argument you are making because there is an implication there that the only reason that you are picking on copyrighting is that it happens to be and it

sounds, I don't think you mean it, it almost sounds that you're trying to squeeze something within the coat of copyright when maybe some other type of jacket would be more comfortable.

MR. BOROVOY: Well, I don't like to disagree, but I think that analogy is accurate. If the coat almost fits, and it's available, whereas I have to wait 10 more years to get one that is absolutely perfect, I'd rather have the one that I can get by with rather than freeze.

COMMISSIONER NIMMER: As you define author in order to make the coat fit, does an author differ from inventor? Do the two concepts merge? How do you separate an inventor from an author?

MR. BOROVOY: Well, I think the only way you can do it is in a statutory sense as we discussed it. None of these things lend themselves to patent protection.

COMMISSIONER NIMMER: Right, but only certain inventions are subject to patent protection, but an inventor invents.

MR. BOROVOY: Right.

COMMISSIONER NIMMER: And as you're using author, do the two terms become interchangeable?

MR. BOROVOY: Well, in a copyright sense, I don't think the copyright statute distinguishes between quality of work or amount of authorship. As you have previously mentioned, "My Country 'Tis of Thee" is just as much a copyrightable work as "War and Peace."

COMMISSIONER NIMMER: You must be novel in order to be an inventor, you can be original in order to be an author.

MR. BOROVOY: Yes.

COMMISSIONER NIMMER: But when you say -- you spoke earlier of it's just as much authorship to write, to tell, the machines what to do as it is to write an original piece of work? Isn't that what an inventor does? He tells the machinery what to do. He figures out what machinery can do and arranges it so that it does it?

MR. BOROVOY: That's right, but back again, computer program lawyers have tried for the last, let's see, 10 or 15 years to obtain some kind of patent protection on computer programs, and the patent office has consistently frustrated that effort.

It just instinctively seems to me that computer programs lend themselves more to copyright protection as the work of an author, than they do the way the patent statute is drafted.

Now, I can't help but agree that in an ideal world I'd like to have a statute, the Franum statute, that does exactly what I want it to do, that says these things can't be copied. The Franum statute says, "No." It says that the computer software can't be copied, but I think that that's tilting at windmills.

MR. LEVINE: In that ideal world, under the Franum Act, would you also want the idea protected?

COMMISSIONER MILLER: I've created a monster.

(Laughter.)

MR. BOROVOY: I don't want the idea to be protected in any more broad sense than -- no, it's the embodiment of the idea I want protected. Again, I have no objection to these concepts that copyright protection on a computer program shouldn't prevent a person from doing that same chore to have a business system. Just that he can't copy mine. He has got to go and do his own.

CHAIRMAN FULD: If we had a definition such as was suggested, a computer program is a fixation of a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result, would that protect it in your judgment? The chip?

MR. BOROVOY: The chip being the -- we have got -- I haven't really gotten to the main theme of my being here this morning.

CHAIRMAN FULD: But to protect it.

MR. BOROVOY: Let's talk about the game chip, the Fairchild or the Parker game. No question that would protect that.

COMMISSIONER PERLE: The chip or the program?

CHAIRMAN FULD: The chip is a program.

COMMISSIONER PERLE: No, it isn't.

MR. BOROVOY: The chip is just the box, the container.

COMMISSIONER PERLE: Yes, but we can't protect the

container. We can't protect the chip.

MR. BOROVOY: I don't want protection on the container. I want protection on the contained program. I don't care whether it's on a chip, on a piece of paper, on a magnetic tape.

COMMISSIONER PERLE: You are talking about protecting the programmer as fixed.

MR. BOROVOY: So far, I am talking about the programs. I am going to get to the other subject which is the topography issue which is beyond our present consideration, but --

CHAIRMAN FULD: That would not be encompassed by this definition.

MR. BOROVOY: No, the topographic issue will not be encompassed by what you just read. That's strictly the program, and the chip happens to be one of a myriad of ways of storing a program. I don't see any reason why a chip should be discriminated against and, as a matter of fact, I did get an informal understanding from the Copyright Office under their Circular 61, as long as we provide them with a dump, which is required under Circular 61, they would accept two chips.

COMMISSIONER PERLE: This Commission may not.

MR. BOROVOY: They will accept two chips for deposit of a program with the chip being the medium containing the information.

COMMISSIONER NIMMER: As long as what? As long as it's

contained in some other form? Is that what you are saying?

COMMISSIONER PERLE: Dump.

MR. BOROVOY: No, no. Circular 61 says, "We the Copyright Office will not opine on the copyrightability of computer software, but rather than create a hassle, we will accept computer software for deposit and let you fellows worry about whether it's copyrightable or not." We won't argue with that, and they are already accepting tapes, disks, all the normal things --

CHAIRMAN FULD: And what you're holding?

MR. BOROVOY: You send two tapes, two disks, and a dump. They require a visually perceivable form.

MR. KEPLINGER: A dump is a printout?

MR. BOROVOY: Yes.

MR. LEVINE: In '78?

MR. BOROVOY: I assume, because I haven't heard anything different, but they did tell me on an informal basis and I haven't yet tested it, but I am going to shortly, that they don't care whether the program is on a chip or on a tape. It's the same to them as long as you provide them with a visual, readable thing, they will accept the deposit of the chip as the container of the program; but not if I am registering it for the pictures on the top of the chip.

COMMISSIONER KARPATKIN: How would you provide them with a dump?

MR. BOROVOY: A dump? That would be a truth table

from the simple case of the ROM program, I provide them with a truth table which would --

COMMISSIONER PERLE: Define it once again.

MR. BOROVOY: Yes. There is a thousand bits of memory. A bit is strictly the ability to know the difference between right and wrong. It's yes and no. I have got a thousand, actually it's a thousand twenty-four all in binary count, there are a thousand twenty-four spots on this chip that are either connecting or not connecting and that can be represented on a truth table which is just one or zero normally one being yes. I have a little road map that shows probably in a square of 16 -- let's see, for a thousand, it would be 32 by 32. 32 on the side, and it will have a bunch of ones and zeroes like a checkerboard and that is the visually readable form of what is on this chip.

CHAIRMAN FULD: Your problem comes through when there is a photograph taken of that; is that it?

MR. BOROVOY: Yes. Not -- my problem doesn't come, I don't think, if it's just a photograph of a truth table. I am looking at more complex forms of this which are not a truth table and are embodiments of circuit function done by a designer, a layout designer, and that is the part that gets even more complicated than just the truth table.

If I could, I would like to turn to that.

CHAIRMAN FULD: Why would you have to make a photograph?

MR. BOROVOY: Well, that gets back to the process which

is exactly where I was.

COMMISSIONER PERLE: Before you get there. I want to get back for one minute to the Franum Act.

MR. BOROVOY: Did you get the spelling of Franum?

COMMISSIONER MILLER: F-r-a-n-u-m. It's my statute, and I will spell it anyway I want.

COMMISSIONER PERLE: I had a professor at law school who, when he got a certain type of answer, would say, "Very good, let me paraphrase you."

You said that in the ideal world, you would rather have the Franum Act protection than copyright protection. Is it not possible that you don't mean that? That in the ideal world that copyright protection is the best of all possible protection? If this is in fact, whatever way the writing of an author gets you through the constitutional problem and is an original work of authorship, it matters not what the meaning or fixation is -- which is what you said -- nor how it is perceived, nor the function to which it is immediately put. It is just a question of whether it is an application of intellect to something which can be a fixed recording and is that specific form of expression protected? If that be so, then what you want is not Franum but copyright.

MR. BOROVOY: By that definition, I can't help but agree. That's exactly what we want, and that is protection on the intellectual process, the result of the intellectual

process, of a computer program that takes hours and hours, weeks and months and years to come up with -- what ends up in this little truth table which can be ripped off in five minutes.

COMMISSIONER PERLE: Thanks for the paraphrase.

MR. BOROVOY: Okay. Back to the photography issue. How does photography get into manufacture of the micro-computer chips? The process is outlined in this -- right at the beginning where it starts with "Idea." Then Step No. 1 says, "Design Process and Circuit from Idea."

Now, at that point, the only intellectual property developed in Step No. 1 would be subject to patent protection. I have no qualms with that except for the minor exception.

There on the top left is the circuit schematic. Now, in addition to patent protection, I assume I could put copyright notice on that schematic and someone couldn't copy that schematic, but that protection doesn't do us any good, because it's never distributed to anybody. It's kept as a company secret. There's no need to let that out.

MR. LEVINE: That is drawn by a human being?

MR. BOROVOY: Yes, that's drawn by a human being.

That's the work of an engineer who did the invention. He may well have a patent on that circuit, some aspect of it. He may have a patent on the process for making the particular circuit.

We have a lot of patents on processing these wafers, but of course, those processes are good for making any circuit of the type the process builds, not just any one particular circuit. The particular circuit may also be patentable. The particular circuit, the way one of those transistors is connected to a resistor, a switch, or something comparable --

If somebody actually photographically copies the chip, they will also infringe the patent by definition. No way around it, because you have copied the exact circuit function. The problem the industry faces is that the process is, and the circuits are, all being developed all over the place, and the patents generally are overlapping. The industry has turned to what is known as cross-licensing and everybody is licensed under everybody else's patents because otherwise, you couldn't exist very easily.

What happens in an industry where the patents are all cross-licensed, where there is overlapping fertilization, where there are several companies who are leaders who are doing all this work themselves and are spending huge amounts of money? INTEL spent, last year, $28,000,000 in R and D which is one of the highest percentages of sales of any U.S. company. We are in the top 10 or 20 of U.S. companies in percentage of sales spent on R and D.

How are we going to finance taking this patentable circuit, to take the best light on it, and spending

$100,000 to $200,000 of skilled draft persons? These draft persons make $20,000 to $30,000 a year, and they are not just amateurs. They take a lot of training. This is all done by hand. This is the big picture here. This is all done with crayon and pencils and ink and it isn't -- there is an infinite variety of that big picture that can be made from the little picture. It isn't just this one.

This is the clever skill of these people in making it as compact as possible and to be -- it's got to be within design rules so that it can be produced photographically. It's a very complicated, expensive process which costs money and time. If there is no protection on this, which is really useless because it covers such small aspects of the thing, if there is no protection against somebody photographically copying this from the finished article, which is the way you will do it?

We will get to that. I guess it's easier to -- this is a wafer with, let's say, 300 of those on it. (Indicating.)

Each little square is a complete micro-circuit. That is a computer on a chip. That's the chip. That is 300 chips in a full wafer. If it is possible for someone to take one of these chips which they buy like this, take the package off very easily, and they use filtering techniques on a photo -- to take a photomicrograph using a microscope with a camera mounted on it, take a picture of

the top layer and nothing else shows up but the top layer, these are the layers that are used to make the thing. (Indicating.)

This is the way it looks in a composite form. That's the way it looks from the top of the chip. Here's the first layer which is metal, aluminum. So, with the right filtering, you can get a picture that looks just like this, and enlarge it and go through the whole process photographically to get a mask. Then you etch off the top layer with acid that doesn't attack other layers, which just attacks the top layer, and then you take pictures with the appropriate filter. Then you take one of the next layer, and so on, until you have got the whole thing, cost of $20,000 to $30,000. This can be done in 30 days in Japan, and you end up with a set of masks.

Now, I am exaggerating a little because it is not quite that simple and you have to do a lot of fiddling once you get the mask to make it work, but nothing like the amount you have to do to design that. (Indicating.)

Now, as the chips get more complex, and if there is no protection, what is going to happen is we are not going to be able to afford to spend $28,000,000 on R and D because the copying techniques are going to get better, the engineering techniques are going to get more expensive, and as the chips get bigger we are just going to say it's just not worth it. We don't get any lead time anymore.

We spend all this money and somebody has a copy in short order. I think that's going to be a classic case in the TV games once they have a universal game where there are enough of them in existence so that it pays a rip-off artist. There aren't enough now to do that. Someone will copy the chip from the cartridge and sell it for a cheaper price because they didn't have to spend the money in developing.

Now, exactly the same thing in this chip topography that they can copy these photographically.

Now, if you look at your chart again, you'll see how we get back to the process where -- in No. 2, it says "Layout circuit and digitize." Well, the layout is what takes all the time, and that's what produces that. It is all done by hand. It can't be done by computer -- eventually, maybe in 20 years, yes -- but now the human mind is creative and comes out with something much more compact and much more usable than a computer can come out with. That is the work we wanted to protect going from the schematic to that.

COMMISSIONER PERLE: What is that called?

MR. BOROVOY: That is called a layout.

Then the computer moves in and what they have to do is take a -- on a big table they have a pencil that plugs into a computer and they trace all those lines. So far, only the person who drew this knows what's there, and it's on the picture. You can't photographically get this into

a computer, at least not with existing techniques.

What you do is physically trace the thing which takes a matter of weeks, not years anymore. No creativity. It's just a tracing job, and as you trace, the computer knows where all the lines are. All you do is touch the tracer here and you touch the tracer here and you push a button and the computer knows that there is a line from there to there. You just keep doing that and that's called digitizing, and that comes out with something that's an exact copy of that.

Now, the computer knows. From then on, once the computer knows, then the computer takes over. So, it says layout circuit and digitize.

The next step is to generate optical reticle. That is done with strictly a computer photographic technique. An optical reticle looks like this. This is one layer. (Indicating.) Oh, that's another thing, the computer knows the different colors. Each of the different colors is a different layer, and the computer is told when you are doing one layer and the next layer, so the computer, which is this composite, the computer will have it in mind that it is seven layers. It will either reproduce a composite like it did there or it will reproduce layer by layer.

This is called a 10X reticle. This is 10 times the size of the actual circuit, and it is made by the computer once that information is put into the computer. It is done

by a photographic step -- photographic flashing process using photographic film.

COMMISSIONER PERLE: Of all the layers?

MR. BOROVOY: This is one layer. You have to have it one layer at a time. You never need all the layers in the manufacturing process. I mean, all of them together, because they are made one at a time. This is one layer. If it's a seven-layer process, I'll have seven of these, or eight, I'll have eight, depending on the steps of the manufacturing process each one takes one of these. This is not used in the manufacturing process. This is something I store in my safe. This is my permanent record of the layer, but it's too big. If I used this, I would never be able to make the chip with today's technology because we aren't able to get a decent yield of chips that big. It isn't used this way. What happens is it is put into a step and repeat equipment, and what it does is it memorizes this, reduces it down to 1X, the real size of the chip, and it reproduces it on what is called a master plate.

This is the same pattern of one layer reproduced that number of times. You notice that it is square, the wafer is round so we are going to lose something in the edges when it's used to print, but this plate which is made from the 10X reticle, this is one time but it's stepped and repeated about 300 times. This is exactly the same pattern reduced to actual size and repeated 300 times. This is used,

actually used, in the manufacturing process. We have one of these for each layer and if you look at --

COMMISSIONER PERLE: What is repeated 300 times?

MR. BOROVOY: The chip. This 1X -- this 10X reticle that we had a minute ago.

COMMISSIONER PERLE: Okay.

MR. BOROVOY: This one is reduced down to one of these little squares and is repeated. Each one of the little squares is identical. Each one represents a micro-computer chip, and then this is used in the manufacturing process of the wafer. If you look down, three, where you are generating the opticle reticle; then four, generating the master masks; then here, we are with the master masks; then five, you are generating working plates. That means you also have one of these. (Indicating.)

This is a super perfect one that we store in our vault, and then, you actually generate -- depending on what process you use -- if you are using what is called projection alignment. You never hurt these, you only need a couple. If you are using contact printing -- if you've never done photographic work -- that means you just set the negative down on the wafer. Those wear out after about 10 times. If you are doing contact printing, you make lots of these. They are just photographic films. If you are using projection alignment, so the wafer is separate from the plates and it never touches, it is good until it breaks when you'd

only make a couple of these. So generating working plates either means one or two working plates or lots of them if you are using emulsion.

The world is going entirely to projection printing because it is more accurate and cheaper from the mask standpoint.

All right, so now the photographic process meets the silicon for the first time and now -- look at Figure 5. This silicon processing, which I won't go into, goes from 7 to 11. You got your wafer ready for a photographic step and you bring this mask down near the wafer and you project the image on the wafer which has got photographic material on it and it's just like exposing any kind of negative. This operates to shut out light and it exposes this pattern onto the wafer.

Then you go down to 12. They show aligning a working mask with the wafer which is done in an optical machine. A person sits there and looks through a microscope and lines it up so it is correctly -- because you are doing this seven times and they all have to be in registration. If any of you have done any art printing, it is exactly the same process.

Then you go to the chemical processes to cook the material and to actually make the physical changes into the wafer through the mask. Then you get down to the bottom, 17. You do some electronic tests to make sure it's good.

If it is not, you put an ink dot on it and throw it away later and if it is good, you don't put an ink dot on it.

18 is scribe and break which means you take this wafer and you use a diamond scribe and you go through in both directions, and you roll a roller over it, and it breaks it into the pieces where each one is the size of that. (Indicating.)

COMMISSIONER WEDGEWORTH: What is implicit is that you put all the layers together in this last line?

MR. BOROVOY: Well, you repeat the wafer through the process for each layer.

COMMISSIONER WEDGEWORTH: Right. What I am saying is that that step seems to be skipped here. Well, it is implicit.

MR. BOROVOY: That you are going to repeat this? Well, it is. 16, repeat Steps 12 to 16 for successive masking layers.

COMMISSIONER WEDGEWORTH: Well, when you get to 17, you get all seven layers together.

MR. BOROVOY: Right. Then you're finished. Then you are testing it electronically, and of course, the name of the game is yield. If it's a big enough, complex enough chip, we will be happy to get one good one, on the average, per wafer. This is in new products. Older products, we like to get a few hundred good ones on a layer.

That is why the learning curve and the price keeps

dropping. Then you put it into the package, which is here, that is the step done in the Far East because it is hand labor, and you put it on.

COMMISSIONER KARPATKIN: Could you run that by us again?

MR. BOROVOY: Don't what?

COMMISSIONER KARPATKIN: Could you run that by us again?

MR. BOROVOY: The putting in the package?

COMMISSIONER KARPATKIN: Don't Westerners have hands?

MR. BOROVOY: They have more expensive hands than Filipinos.

Again, we are revolutionizing our own industry. The micro-computer is now used in the equipment for putting these little wires on the chip and now instead of having to put -- say this has 40 leads which means it has 40 wires on it. It's a little bit sort of a sewing machine action. The wire goes from the chip to the lead. Now, with these micro-computer control wire bonders, instead of having to do 40 of them, the person with the machine under a microscope does one and the machine knows how to do the rest of them.

So, our technology is very likely to bring these processes back to the United States as the labor content goes down.

Now, back to the theme which is the expense in getting that design and not being able to protect it in any way other than patent, other than patents, and having somebody else be able to take the finished product and copy

the design, literally copy in a photographic sense. It is an uphill fight to get anyone to recognize that there is anything copyrightable in that design because of the Mazer vs Stein -- the case with the strip graph --

COMMISSIONER MILLER: Brown vs Warren Instruments?

MR. BOROVOY: Right. Well, that's one of them. There are several. In those cases they say it is an article of utility and under the new statute, I just read your article, under the new statute it gets even tougher because there is language in the statute that talks about the utility and the ornamental aspects having to be separable. Oh, the Esquire case.

MR. APPLEBAUM: Have you tried any mechanical ways of shielding that from photocopying?

MR. BOROVOY: We haven't tried any. I am not sure there could be any.

You mean some sort of a coating?

MR. APPLEBAUM: Some kind of a mask or coating.

MR. BOROVOY: Well, for example, one way of packaging is the chip is embedded in plastic but there are all kinds of chemicals that will dissolve the plastic. There is nothing that we know of that happens to be totally non-destructive including this one where it has to have that glass on it in order to erase it. The ultraviolet light has to get through that glass. So there is no way we can cover it up because we wouldn't be able to erase it.

COMMISSIONER NIMMER: Am I oversimplifying when I say that really what we are talking about is the protectability of that thing because the chip is simply a reproduction through a very complex process of that?

MR. BOROVOY: That is exactly right.

COMMISSIONER NIMMER: So then, looking at that on the wall --

MR. BOROVOY: Could I sit down?

COMMISSIONER NIMMER: Please. Would you call that a program?

MR. BOROVOY: No.

MR. APPLEBAUM: Circuit?

MR. BOROVOY: No. It's a representation of a circuit.

CHAIRMAN FULD: Isn't it a photograph of a program?

MR. BOROVOY: That is not a photograph, it becomes a photograph --

COMMISSIONER NIMMER: The photograph aspect, I think, is a false lead. You can't claim copyrights in a photograph. The only thing that is copyrightable in a photograph is the exposure, the lighting, et cetera. Here you don't have that, so you go back to what is being photographed and that's that on the wall. If that is not a program but a circuit, then isn't that hardware and not software, and what is there copyrightable in that?

MR. FRASE: Isn't it an engineering drawing?

MR. BOROVOY: Well, the statutes that we registered

some of these under is under engineering drawings.

COMMISSIONER LACY: Just to put it in terms to make sure I understand it. Say somebody has devised a program and has recorded it in the form of a flow chart. It's copyrighted in that form.

With that, they have given you a nonexclusive license to use that program. They may have given somebody else one and in the process of preparing to use it, you draw this layout.

MR. BOROVOY: Yes.

COMMISSIONER LACY: And somebody else in your field could then rip off your layout in this way by claiming he made no copyright infringement because he is relying on his license to use the underlying program.

Is that the analogy that you are thinking about?

MR. BOROVOY: There is no underlying program that will come up with that.

COMMISSIONER LACY: Well, not that comes up, but that records a program; doesn't it?

MR. KEPLINGER: May I say something? I think there may be a lack of communication.

That drawing is not a representation of a computer program in any way. It is a representation of some elements or aspects --

MR. BOROVOY: Of a circuit.

MR. KEPLINGER: -- of a circuit which would be a

functional equivalent of the process which is embodied in the computer program.

MR. BOROVOY: Let me give you an example that may help a little.

The industry does something occasionally called having an authorized source. The customer says that they don't want to be at the mercy of INTEL. What if the plant burns down? They want another source of supply of the same circuit. So, if we are going to authorize a second source, and chances are he will pay us money for the privilege of being a second source, we will give him the tapes, magnetic tapes, which contain that pattern up at the top. (Indicating) He can take those tapes and produce those masks and make the circuit from our tapes.

COMMISSIONER LACY: After you digitized?

MR. BOROVOY: Very good. After you digitize them. The output of a digitizer is a magnetic tape and normally it's seven magnetic tapes, one for each layer, and we license those and of course, we can protect the tapes on the basis of proprietary information and they're not authorized to give them out. That's not a problem.

The problem that we cannot solve, and it was frustrating us, is not someone selling our tapes but someone generating his own tapes photographically by taking pictures of the chip and digitizing the pictures.

COMMISSIONER LACY: Well, how relevant would this be

to the problems of copyright ability of a map where one can't obviously establish proprietorship over the topography and geography that's represented in the map? You can't copyright the fact that Mount Wilson is 5700 feet high but one could copyright, and of course do daily, the draftsmanship that goes into representing these topographical facts in a visual form? Isn't that closely analogous?

MR. BOROVOY: Right. I'd like to analogize by saying we can't copyright that circuit because it is subject to patent laws. The particular embodiment of the circuit, of which there are an infinite number, this is just one, and we have absolutely no objection if our competition takes our circuit, takes the chip, does this photographic thing and takes the photographic thing and learns and works himself back to the circuit schematic which some of our competitors have done.

The reason they do is once they get back there, 1, they will lay it out in their own design rules and their own process. So, it's better for them. It fits their home rather than ours. Second of all, the second time you do it, you can always do it a little better. So they will lay it out in a more compatible manner which enables them to produce it cheaper and make them more competitive. That is something that is absolutely permissible, as long as they have a patent license, permissible under any statute.

We have no objection to that, but what I am

saying is there is an infinite propriety of that that can be done. All we want to protect is somebody photographically ripping off ours.

CHAIRMAN FULD: Mr. Borovoy, your presentation is very interesting and informative, but what function do we perform with respect to it?

MR. BOROVOY: Art, maybe you can address yourself to that.

MR. LEVINE: Well, I really wanted to ask a question first and perhaps that will lead to the answer.

Under the 1909 Act that drawing would have been copyrightable as a scientific drawing under Classification I, and it would have been registerable as unpublished work --

MR. BOROVOY: It still is.

MR. LEVINE: My understanding is that you have registered it as an unpublished drawing or something similar.

MR. BOROVOY: We registered these as unpublished works.

MR. LEVINE: The law then says that there remains an obligation to register to work in its first published form and my understanding is that you submitted the chips as the first published form of that drawing.

Could you tell us what happened subsequent to that?

MR. BOROVOY: Yes. We registered the chip because the chip is indeed the first publication of those drawings. We never let those plastic overlays out of the house or any

of the materials that you see here which are kept in locked, secure proprietary areas. The first thing that goes out of the house is the chip, and the chip bears the copyright notice and the package also bears the copyright notice. So we submitted two copies of the chip as the deposit of the unpublished work and the Copyright Office refused to accept them and said, "We're sorry. We probably shouldn't have accepted the drawings either, and we are not going to compound our felony and accept the chip as a deposit."

We took that up through Copyright Office channels and finally got a refusal. So we filed suit on December 21 in the Northern District of California in the nature of mandamus against the Copyright Office to ask them to accept the chip as a deposit.

COMMISSIONER WEDGEWORTH: Under the old law?

MR. BOROVOY: Under the old law, yes.

MR. LEVINE: If the court decides that there is copyrightable subject matter of that chip that could have been registered under the 1909 Act, would that be dispositive of the issue under the 1976 Act?

MR. BOROVOY: Well, getting back to Mr. Nimmer's issue of whether the 1976 Act intended by the longer section on Articles of Utility to --

CHAIRMAN FULD: Eliminate?

MR. BOROVOY: -- to change what had been the existing case law under Mazer vs Stein, that is something we don't

know. You have to go to legislative interpretation, but it would certainly go a long way if the court determined that this did have copyrightable subject matter.

CHAIRMAN FULD: I come back to my query. What are you asking us? What do you suggest your presentation accomplished here?

MR. BOROVOY: Well, unfortunately, as I understand from Mr. Levine, the Charter of this Commission ends the end of July and is probably not going to be extended any further. I'm afraid it may be too late for you to consider this at all in connection with your examination of computer programs. I merely brought it to your attention because I think all of you are going to be instrumental in working with the Congress in enacting some amending legislation. I'm hoping to or through Congressman Kastenmeier, and our Congressmen from California, to encourage them to include some kind of protection --

CHAIRMAN FULD: What would the amendment provide?

MR. BOROVOY: Pardon me?

CHAIRMAN FULD: What would the amendment provide to cover it?

MR. BOROVOY: I think it almost has to be handled like the phono record case where there is a specific protection for that specific form of copying. As many of you may or may not have read, but it's been in the Business Week, and Electronics, and the New York Times, and the various areas

of the press, the Japanese, for the first time, are making a real thrust in the semiconductor business in the United States.

It's been our total haven of technology. All the technology grew up here starting in Bell Laboratories and Shockley Laboratories in California and through the diffusion in many semiconductor companies that grew up around Shockley and split-offs of split-offs and Texas Instrument and Motorola, all the leaders in the field have pretty much had the area to themselves and just recently the Japanese are becoming a threat, and of course, they are heavily subsidized by their government to the tune of some $200,000,000 last year to get into competition with us.

If the Japanese turn to techniques like this, of copying the masks, it's going to kill our industry.

CHAIRMAN FULD: The English report didn't address itself to this question?

MR. BOROVOY: I don't think so.

COMMISSIONER WEDGEWORTH: I am not sure that I understand the thrust of your last comment. Are you suggesting that the most likely way in which the Japanese will become competitive in this industry would be to reproduce the work that's already been done in this country?

MR. BOROVOY: We don't know. I can't say that it will or it will not. It certainly provides an avenue for a fast entry if the Japanese develop copying techniques to

enable them to do this. To date --

COMMISSIONER WEDGEWORTH: Are there copying techniques that are already known in this country among those firms that are already in the business?

MR. BOROVOY: Yes. They have not been used to a significant extent as yet, but our fear is --

COMMISSIONER WEDGEWORTH: Is there any reason as to why that hasn't occurred?

MR. BOROVOY: Well, I think we are just at the thresh-hold where the complexity has gotten to the point where it is more economical to copy than to do it yourself. As I say, there are advantages to do it yourself. You can come up with a smaller chip. You can fit it to your own process. However, as the chips get bigger and bigger and more complex we are very afraid that we are right at that borderline and that copying is going to be the wave of the future and before that happens we are hoping to have some way of preventing it.

MR. FRASE: What were the grounds of the Copyright Office in refusing you?

MR. BOROVOY: Articles of Utility. Flat out. We don't accept registration of Articles of Utility.

COMMISSIONER LACY: But it had utility other than its design component thoughts. It is not a vase or a cigarette lighter or --

MR. BOROVOY: It's a computer.

COMMISSIONER LACY: Well, I mean the drawing on the wall is not a computer.

MR. BOROVOY: No, that's right.

COMMISSIONER LACY: A drawing that has no utilitarian content except for this information it bears, it seems to me, it's precisely analogous to an engineering drawing or a map.

MR. BOROVOY: No problem as an engineering drawing, but then we have to fight through the Triborough Bridge case and the House Design cases because the infringer does not copy our drawing, he copies the finished article.

COMMISSIONER KARPATKIN: What is it the Japanese would copy?

MR. BOROVOY: The chip. They would generate their set of masks by chemical and photographic techniques starting from our chip, from our finished product.

COMMISSIONER PERLE: They would be copying that in fact.

MR. BOROVOY: What they would end up with at a first cut is something that looked like this. It would be a little crude.

COMMISSIONER PERLE: Is that copyrightable in and of itself?

MR. BOROVOY: Sure.

COMMISSIONER PERLE: Under the new act would each one of those be copyrightable?

COMMISSIONER MILLER: Those are engineering drawings

in effect.

MR. BOROVOY: I don't think there is any question.

COMMISSIONER KARPATKIN: If that is what the Japanese would copy and they are copyrightable, what then?

MR. BOROVOY: No, no. That's the problem. If the Japanese had access, they can't copy this. They have to copy this which they have access to. This gets right into the Triborough Bridge case and the architecture cases which say, "All right, if somebody steals your architectural drawings and copies them, that is a copyright infringement." However, if someone goes up to the house with a tape measure, that's not a copyright infringement and the Japanese threat is that they are going to go up to the house with a tape measure.

COMMISSIONER MILLER: In other words, they're going to steal the copyrighted work in its utilitarian form and the utilitarian form does not represent an element of the copyright in the nonutilitarian form the drawing itself.

COMMISSIONER KARPATKIN: What is uniquely Japanese about that? Why don't Americans do that? It's not an ethnic character.

MR. BOROVOY: It used to be. You are talking about Chinese copies. I have to say in fairness to the Japanese that their competition today has been to design them themselves. We know of no instance of the Japanese copying photographically. There are a couple of American, photo-

graphic copies of American competitors, at the present time. This changes as the chips become bigger and more complex. By the time we wake up and find that the world has changed and the Japanese or Americans are universally going to copying, it's going to be too late to do ourselves any good in terms of getting protection. That is why we are starting to worry about the problem today.

COMMISSIONER WEDGEWORTH: One more question. I felt that I was beginning to get a handle on the copyright ability until we got to the last 10 minutes of this discussion in terms of what is actually being copied. I see that that situation is likely to get worse in terms of the ease of being able to discern what is being copied as those designs become more complex and they are reproduced in the manner that you were suggesting. Do you think that, you were saying that this activity is likely to become quite prevalent, the use of the microcircuitry over the next five years, do you think that, you know, based on your understanding of the way it is developing now, that it will be clear as to what is going to happen, say, in a three to four year period from [illegible] now?

MR. BOROVOY: You mean clear from the point of view of whether the industry is going to copying or doing their own work independently?

COMMISSIONER WEDGEWORTH: That and also since there will be more obvious manifestations of that activity in

the products now on the market. Now what I am getting at is that we may be at the point where it's premature to suggest whether the present form of copyright or some other form of copyright would be more appropriate. The more dominant use of this microcircuitry may be clear within the next three to five years. Do you have any comments on that?

MR. BOROVOY: Well, what I am afraid is that --

COMMISSIONER WEDGEWORTH: Because most of the things you are saying is that this might happen and this is what we expect to happen.

MR. BOROVOY: But if my fear is correct, and in the next couple of years the industry goes to a copying mode, and there is no protection for the innovator, it is going to kill the industry. The innovator can't afford to spend two years and $200,000 to come up with something that somebody else can get for $50,000 and in six months. It just is no longer a viable program.

COMMISSIONER WEDGEWORTH: Okay, let me have a quick reaction to an idea that does fall within the scope of this Commission charge.

Suppose this Commission were to say that we feel that there is a substantive issue of copyright here in terms of microcircuitry. However, because of this problem of authorship and the unclear distinction between the author and inventor in this process that we think that for the

time being we believe it to be copyrightable under the present statute, but that we would like to have the register take another look at it five years from now and review it to see if the development of the industry and the practices within the industry would suggest that we probably ought to spin it off into a different kind of statute than the copyright law as we presently understand it. What would be your reaction to that?

MR. BOROVOY: Well, in beginning that with Mr. Perle's earlier question if there was ever a case where it fits square hammer and tong right into the copyright protection, it's this because we are talking about out and out copying, photographic copying of designs. The only bar to copyright protection under the present statute is that concept of Articles of Utility --

COMMISSIONER WEDGEWORTH: Well, I am talking about this not the engineering drawing.

MR. BOROVOY: You mean the chip?

COMMISSIONER WEDGEWORTH: Yes.

MR. BOROVOY: Yes.

COMMISSIONER WEDGEWORTH: It's only an opinion.

MR. BOROVOY: Well, it certainly helps me that there is an opinion that that chip contains copyrightable subject matter. That the Commission determined that it contains copyrightable subject matter and that Congress ought to address that in the future. This would be of tremendous

benefit, I think.

MR. FRASE: Wouldn't it come in within the Commission's jurisdiction as a form of machine reproduction? We could make recommendations about machine reproduction.

COMMISSIONER WEDGEWORTH: But the key that I see from the testimony though, is all of this guesswork about being on the threshhold of an industry that hasn't really formed itself?

MR. BOROVOY: Well, the industry formed itself.

COMMISSIONER WEDGEWORTH: Well, I mean the process.

MR. BOROVOY: But the copy industry hasn't formed itself, but it would be a terribly difficult situation. There has been some copying as I say. It doesn't happen to be Japanese, but there is some. I don't want to wait until it's prevalent, and we have to cut back on our R and D budgets, which would be tremendously deleterious to the United States as a nation. This is an industry that we all hold our head up high and say that this is us. It is what we did and is our creativity. A lot of money has been spent.

COMMISSIONER KARPATKIN: From the point of view of economics of the situation, this isn't established industry as you said. We have a considerable history in this country of established industries surviving and flourishing notwithstanding that that which is important and uncopy-rightable gets copied. Bridges, of course, are not mass

produced items but houses are. That can be done, but even more, very beautifully designed dresses, for example, get knocked off by lower priced dresses which rush into mass production both here and abroad and they get knocked off both here and abroad. Yet, the dress industry has flourished and the $400 and $600 and $1,000 dresses continue to be created notwithstanding that you can buy copies at Alexander's for $50.

Why wouldn't the same thing happen? It is not unAmerican to copy because we have a history of it.

MR. BOROVOY: Well, that is an easy one to answer. Well, the fact is, I would like to say, when the product goes out the door it has the INTEL brand name, someone is willing to pay $60 because of the INTEL brand name, $20 of which is to pay back INTEL for the R and D going into doing that and they wouldn't want to buy the $40 copy from somebody else because it doesn't have the INTEL brand name. Unfortunately, the truth is that if the copier is successful in copying the product it will be totally indistinguishable and there is no aura or image or PR.

You feel better when you go to the party in a Balenciaga gown.

COMMISSIONER KARPATKIN: But this world is filled with people who don't feel better, they feel better having gotten one very much like it at a fraction of the cost and without the label and there is a whole industry where people pay

less.

MR. BOROVOY: Loehmann's.

COMMISSIONER KARPATKIN: Right.

MR. BOROVOY: But what I am saying is that there is no market for the $60 variety. That is the original. There is zero market for the $60 original if the $40 copy performs the same function.

COMMISSIONER KARPATKIN: From a consumer's point of view why aren't they better off having available in the marketplace a lower priced product which is, as you say, in all respects identical except for the brand name if there is no difference in quality? Why shouldn't the consumer have access to a lower cost product?

MR. BOROVOY: They should. Except that if the consumer has access to the lower cost product and there is no market for the higher cost product, the higher cost product has to by supply and demand go away.

COMMISSIONER KARPATKIN: That doesn't happen in prescription drugs where you can get a generic name drug at a fraction of the price of the brand name drug and the drug company still has a substantial R and D.

MR. BOROVOY: And there seems to be a lot of controversy about the drug companies' methods of marketing just for those reasons.

CHAIRMAN FULD: There is a question of morality.

MR. BOROVOY: Well, what do you mean?

CHAIRMAN FULD: Well, it's immoral to copy.

COMMISSIONER KARPATKIN: Well --

MR. BOROVOY: I'm not sure about that.

COMMISSIONER KARPATKIN: As a practicing lawyer, you never picked up something from somebody else's brief?

COMMISSIONER LACY: What induces the drug investment, though, is the patentability and protection for the term of the drug which they've originated. It's not the margin between --

MR. BOROVOY: And the drug companies haven't been forced to the cross-licensing extent. I think that's one thing that's unique about our industry that the inventions are so spread out that cross-licensing is a necessity, and therefore, there is no protection against the out and out copier from the patent laws. What we're trying to do is draw a distinction between the copier and the innovator.

CHAIRMAN FULD: It's seven minutes to 12:00. We want to leave in about three or four minutes.

COMMISSIONER WILCOX: What I was wondering in this process, how does this differ, or the layout circuitry, how does that differ from an architectural process where the draftsmen take the idea of the architect and produce the working --

MR. BOROVOY: I think it's exactly analogous.

COMMISSIONER WILCOX: And so, but --

MR. BOROVOY: I think the difference is the quantities

that result.

COMMISSIONER WILCOX: Well, in that sense the same thing is true there, isn't it, in that a custom designed house, probably a lot is paid for when this is done and yet when a mass produced house is produced, you get the same kind of thing happening? We don't really copyright the architect.

CHAIRMAN FULD: Talk a little louder, Alice.

MR. BOROVOY: Not being an architect, I can't really comment although I think that your analogy is an appropriate one. I think you are talking about the differences of the size of industry, the numbers of copies that are likely to be made. Certainly going from the architect's sketch up there, to that, is certainly analogous in terms of the amount of work that has gone into it.

CHAIRMAN FULD: Are there any other brief questions?

COMMISSIONER WEDGEWORTH: Well, a brief question.

Do you see any real difference between my going out, photographing the Brooklyn Bridge, and going back to creating and then going out and photographing your product here and going back and reproducing that?

MR. BOROVOY: No, I don't. It's just a matter of quantity.

COMMISSIONER PERLE: If that be the case, then copyrighting is not the appropriate mode of protection. In the process of this, as I understand it, and the process of ripping off your little chip, there is at least one point where there is an actual copy of something which is by its nature copyright-

able which is that.

MR. BOROVCY: The mask. But, the copy was not made from the copyrightable material.

COMMISSIONER PERLE: I'm not sure of that. I'm not sure of that at all.

MR. BOROVOY: The infringer never had access to the mask, or the --

COMMISSIONER PERLE: Oh, no, but you must say that in order to have copyright protection, each layer of the chip is protectable. Each layer of that chip.

MR. BOROVOY: That's the distinction from the bridge case.

COMMISSIONER PERLE: So, here, they are actually copying seven layers rather than the bridge and they are going back on their own and figuring out what must have gone into the stresses and strains and pilings and all the rest of it. Here they are actually, maybe just merely mechanically or photographically, copying layer by layer the pilings.

COMMISSIONER NIMMER: Would you say that it's the stronger or weaker case?

COMMISSIONER PERLE: Stronger.

MR. BOROVOY: A better case for copyrightability.

MR. APPLEBAUM: Well, you mentioned a couple of violations. Have they been prosecuted?

MR. BOROVOY: Not yet.

MR. APPLEBAUM: They will be?

MR. BOROVOY: We are talking to the infringer about licensing and they may -- it looks like they are going to pay us.

CHAIRMAN FULD: Well, I think we better recess now. Do you have a short question because you are usually pretty long.

COMMISSIONER MILLER: I want to make sure of something.

What you are really asking this Commission to consider, and it's really very closely related to John Hersey's concern with the program, only yours is close to the photocopying of the program, you have an admittedly copyrightable work. That is this drawing.

MR. BOROVOY: That drawing, yes.

COMMISSIONER MILLER: Arguably rather than admittedly.

COMMISSIONER MILLER: All right. You are from the West Coast, and I'm from the East Coast.

(Laughter.)

You are sending that through a series of transformations and with each of the transformations it gets further and further away from traditional concept precepts of protecting works that communicates to human beings. At some point it doesn't communicate to a human being at all. At that point somebody is making a photograph of it to produce a utilitarian counterpart to your noncommunicative utilitarian work.

What you are really saying is that the law of

copyright should be extended to protect these increasingly noncommunicative transformations of an admittedly (probably) copyrighted work.

MR. BOROVOY: I guess I am putting a lot of weight in the word "copy," in the part copy in the word "copyright." I think that copying is clear. Now, whether or not it is copyrightable subject matter is the issue, and I think it should be, as the only means of stopping the photographic copying.

CHAIRMAN FULD: On that note we will recess. You have our thanks. We will come back at 2:00 o'clock to resume our session.

(Luncheon recess taken from 12:00 p.m. to 2:00 p.m.; all parties heretofore mentioned being present.)

CHAIRMAN FULD: Well, we will open this afternoon's session with comments from our director, your Honor.

MR. LEVINE: I thought that perhaps the best way to direct the discussion is to have one of the staff members summarize the subcommittee report in each of the areas. The first would be the summary of the Data Base Report and after that discussion of the summary of the summary. If you feel there is no summaries to summarize, we can dispense with it.

Then I thought we would summarize both the Software Subcommittee Report and Mr. Hersey's dissenting or counteropinion -- report, if there is no need for a summary.

CHAIRMAN FULD: I think it's a good idea to have one of the staff.

MR. LEVIN: Chris, why don't you.

MR. MEYER: I am sure you already notice that this document which I'm summarizing is only a page or a page and a half long and should take not very long to get through. I think also it's probably true, as you all observed since we've been doing this, that the least amount of controversy has to do with the subject here at hand. It is more than just the so-called Automated Data Base to the extent that this Subcommittee or Committee has been examining and making recommendations with respect to the placement of any copyrighted work in the computer area. Very briefly, the eight points on the front page are an attempt to encapsulate the last version of the Data Base Report and to amend that where necessary because of changes that may have taken place since then, chiefly the two footnotes on page 1 which appear -- well, the first one appears very easy to understand but may create some problem.

It created problems in the minds of people who have responded to the Software and Data Base Subcommittee Reports. The explanation -- the footnote really refers to the Software Subcommittee Report at 19 and 20, which is a useful document to have in hand when you are reading this.

Very briefly, again, the whole point or the points made by the data base subcommittee are that the data bases

in any medium as compilations are copyrightable; that the placement of a work into a computer is a preparation of a copy of that work. That is also fundamental to the proposed Section 117 in the Software Subcommittee Report.

The footnote refers to the possible conflict between the language of the House Report at Page 53 and the language of the law. The law, as you know, simply talks about the fixation of a work in a tangible medium of expression, while the House Report for whatever reason, and the reasons are not entirely clear, says that "The concept of fixation excludes from the concept purely evanescent or transient reproductions such as those captured momentarily in the memory of a computer."

The people who responded to this, people who raised the question about the conflict between the House Report and the language of the statute, felt that the House Report was wrong. It may well be that they are right and that the language of the law is sufficient in and of itself to lead to the result that placement of any work in a computer memory is the preparation of a copy and is therefore covered by copyright, but it's probably true that as long as the House Report appears to say to the contrary that some language on the part of the Commission, in the final report, might be in order.

The second point is that the doctrine of fair use will apply not only to data bases per se but to any computer-

ized use of a copyrighted work but that the limit to the fair use will be relatively limited in scope when it is applied to such works.

Publication, again, is a concept which loses a great deal of importance under the new law as compared with the old, but it does matter with respect to a lot of notice requirements and with respect to this, we will see in a moment in Footnote 2, some changes that have been made with respect to machine readable work by regulation promulgated by the copyright law effective January 1st. As to the rest of the points made, they were essentially the same as were made in the original data base report.

Item 7 refers to the fact that the nonstatic nature of the data base offers no bar to copyright protection and attendant to that is Footnote 2 which again may be a little easier to read in conjunction with Pages 28 and 29 of the new Software Report which has to do with the regulations promulgated by the Copyright Office to accompany implementation of the new law. Chief among them, as concerns machine-readable works are the notice, deposit, and the registration regulations and very briefly, one which is not cited in this footnote, covers works which are reproduced from machine-readable copies and the notice requirement therefore.

You can find at Page 28 of the Software Report the absolute exemption of the data bases from mandatory deposit under Section 407

and the permissive registration in the Copyright Office of identifying portions of both computer programs and data bases rather than deposit of two complete copies of the work as published.

So as this synopsis suggests, the only statutory change which the data base subcommittee feels is in order is the abolition of the interim provisions as they relate to the computer, mainly Section 117 as it attempts to and probably does freeze the state of the law with respect to the computer uses under the Act of 1909, which would be a singularly improvident result for the long-term future. Indeed the legislative history suggests that upon completion of this Commission's work Section 117 be deleted. Secondly, the Subcommittee suggests that the final report should clearly indicate that placement of a work into a computer memory does amount to the preparation of a copy which is a right exclusively belonging to the copy owner under Section 106(1).

Finally, the report should make it clear that traditional copyright principles govern the preparation of extracts from automated data bases. If the computer output is a portion of the data base, then that output is probably a copy or a derivative work. If it is either then its preparation must be authorized by the proprietor or by law (including fair use principles) or it will be an infringement.

If, however, one has asked the computer or the system to count the number of times a given phenomenon occurs in a data base, and the result is simply a number, rather than an extract of the data base, then what may have happened is not within the scope of copyright. Simply enough what has been prepared is neither a copy nor even arguably a derivative, and therefore, there would be no reason for the copyright as such to apply to that usage.

End of synopsis of synopsis.

COMMISSIONER NIMMER: Slight quibble on the wording as to your conclusion.

Recommendation 2, is treated as independent of Recommendation 1, and I understand what you are saying. 2 goes directly into the sum of what is an ambiguous statement of what constitutes fixation, but also relevant to the input/output is Section 117. That is, as long as Section 117 remains and input is not an infringing act, it seems to me.

MR. MEYER: Probably. I think I understand what you are saying. I agree that it is probably true that No. 2 should refer to that, but I have always taken it from legislative history and the conversations I have heard here in the past year and a half, but everyone more or less acquiesces in the notion that 117 dies as soon as possible.

COMMISSIONER NIMMER: I think that is true but was not clear. At least one reason why 117 should be deleted is its relevance to the input issue.

CHAIRMAN FULD: Any other questions?

COMMISSIONER LACY: I wouldn't want to concede that 117 makes any such input free of copyright, but certainly it would be arguable.

COMMISSIONER PERLE: Amen.

CHAIRMAN FULD: If no other questions we go on.

MR. LEVINE: I would like to get a pretty good idea if that --

CHAIRMAN FULD: I gather we all agree with the report.

MR. LEVINE: -- is silence at least some element of acquiescence?

CHAIRMAN FULD: Well, we can go around.

All those in favor --

MR. LEVINE: Well, I don't --

CHAIRMAN FULD: You want to do that?

MR. LEVINE: No. I guess my question simply is there anyone that objects or is terribly troubled or has questions?

COMMISSIONER CARY: Mr. Chairman, I am not at all troubled by the report of the Data Base Subcommittee itself, but I am somewhat concerned about the problem which I raised in that separate opinion, as it were, at that time: I feel that public interest seems to me to warrant some type of provisions in the statute or perhaps in the Copyright Office

regulations which in certain cases require the actual deposit either of the data base itself or a rather comprehensive abstract of it.

You may recall that the report takes the position that there should be no deposit at all. In other words, it is done away with completely. I just feel that this is a matter that has not been thought through. I am thinking of the fact that if you take the concept that the Copyright Office records have any useful purpose, it is for the purpose of people who want to know about what has been copyrighted to go there and ask and make an examination. The fact that Over the years I have been there, there were thousands of people coming there every year to inspect the copyright documents. If you take the position that in no case shall a data base be deposited, it seems to me that this raises the question of whether -- well, not quite discriminations -- at least makes it difficult for an individual who may be threatened with a lawsuit to have his attorney go in and try to find out what the record shows as what has been copied because the very brief statement that will appear on the record is not enough to really alert him.

I just think it's a matter of some concern which should be given consideration. I would desire to reiterate what I desired before.

COMMISSIONER WEDGEWORTH: George?

COMMISSIONER CARY: Yes, Bob.

COMMISSIONER WEDGEWORTH: Just one question.

In the note No. 2 where we have permissive registration....does this mean that the copyright proprietor is not required to deposit a substantial description of the work being copyrighted?

MR. MEYER: I think your question really goes to the difference between 407 and 408. 407 is mandatory deposit in the Library of Congress. That is exempted absolutely here by regulation.

COMMISSIONER WEDGEWORTH: Yes, I understand that.

MR. MEYER: 408 is registration with the Copyright Office which is not a prerequisite to the obtentionof federal copyright, but is a prerequisite for eventually filing suit and may affect one's ability to obtain damages. What is permitted, the phrase "permit registration" means that they are permitted to file a descriptive identifiable portion of the work which is defined in the regulations as being either, for short works, the entire piece or, for longer works, the first and last 25 files which constitute the data base.

COMMISSIONER WEDGEWORTH: But my question goes --

MR. MEYER: That is what is permissive. Permissive goes to the nature of what documents are filed, not of the fact of filing.

MR. WEDGEWORTH: You haven't answered my question.

MR. MEYER: I'm sorry. Go ahead.

COMMISSIONER WEDGEWORTH: Does it mean that it -- is it

permissive in the sense that it is not required?

MR. MEYER: I'm trying, again. It is never required here because 407 deposit is specifically exempted by regulation. Under 408, they are permitted to register when they register less than the complete work.

Professor?

COMMISSIONER NIMMER: I think Mr. Wedgeworth was getting at the question of, assuming they wanted to register under 408, what must be deposited.

MR. MEYER: I see. Is that the question?

COMMISSIONER WEDGEWORTH: That is the first half. Now, I understand that part of it. The second half of it is that if they elect not to register, this means that it is possible we may have something copyrighted for which there is no decent description of what has been copied.

MR. MEYER: That is true without regard to data bases.

MR. LEVINE: That would be true, well, it wouldn't be true with everything. I apologize, because there will continue to be mandatory deposit required under 407. You are absolutely right.

COMMISSIONER WEDGEWORTH: Yes, that's what I was saying. For data bases, it is possible that there would not be -- then I would support what George was saying. I think that there ought to be something that is required that would show what has actually been copied.

COMMISSIONER NIMMER: Of course, mandatory is not quite

accurate. It is mandatory if the Register makes the demand and then the consequences of not complying with the demand are onerous, but the copyright is not forbidden, as under the old law, but a fine is imposed.

MR. LEVINE: The arguments of the data base proprietors, on the other side, is that data bases are voluminous, that they are updated constantly, and that to require the deposit of a data base every time you have created a new copyrightable work would just be an onerous requirement.

COMMISSIONER WEDGEWORTH: That's not what I am saying. I'm saying that it is possible to have some kind of description, detailed description, of this particular data base even if it is a dynamic data base.

COMMISSIONER CARY: That was in general what I was pushing for. In other words, something to go on the record to alert the person who is interested to know what is this all about and may not be necessary for him to examine the entire data base although it is not inconceivable that in some cases he may wish to. I suppose you could argue that if he gets in a lawsuit he can also see it but maybe he wants to advise his client as to what action to take before lawsuit.

COMMISSIONER NIMMER: But might one not take the position that since the copyright owner has the right but not the obligation to deposit, if he elects not to make a full deposit and registration, he runs a risk that he may not be able to make the infringement claim stick? If he is concerned with

that possible loophole in his infringement claim, he should register. On the other hand, if he is more concerned with the burden of having to deposit, he can elect not to take that burden but then he runs the risk of not making his plaintiff's claim stick.

COMMISSIONER CARY: I guess I am more concerned with the Office saying, "In this area, you may not have to deposit."

COMMISSIONER NIMMER: But you may.

COMMISSIONER CARY: But you may, yes.

CHAIRMAN FULD: Why isn't that reasonable if he suffers a penalty of not being able to enforce his copyright?

COMMISSIONER CARY: I guess I was looking at it more from the other side. A person who is alleged to have infringed, say, a data base, if there is -- well, suppose he has registered but has not filed or he, under the Copyright Office regulations, deposited something that can't be made heads or tails of, a small smatter of it, as it were. I just query in my mind whether that is a way to run the shop.

Well, there would be no incentive for the infringement.

COMMISSIONER PERLE: The penalty that the data base proprietor would run is to sustain a greater burden of proof at the trial, and if that is a burden he is willing to assume, fine, because certain it is that people aren't going to go into the Copyright Office or the Library of Congress to look up data bases to have access to them for their informational

content. So what you are really talking about is solely the process of proof at the trial, and I would think that where you are talking about hundreds and thousands and God knows how many more data bases if each data base is, every day -- you know, it can change every day. You know, the stockmarket report is a different data base every day, and the burden of deposit is far greater than the benefit that's obtained in the very rare instance of infringement suit.

COMMISSIONER CARY: Well, this is what happened in the case of motion pictures. They developed a procedure whereby the Library just did not have the facilities for handling motion pictures. I'm speaking now going back to the days of nitrate film. They didn't have the vaults to take care of these chemically combustible objects. So they made an agreement with the motion picture companies if we need it for any purpose, you will agree to give us a copy, and they have revised this from time to time. At least there is a way for the Library to get a deposit if it is necessary.

Now, I am not urging you. I did not originally, I do not now, urge that the entire data base be deposited. What bugged me was the fact that in the report there was a statement that no identifying material at all should be deposited. I think that something, an abstract of what the data base is or a full outline should be deposited not let them get away without depositing anything. That's my real point.

COMMISSIONER LACY: Do I understand the situation correctly that the register would be acting under potentially one of two different authorizations? One in Section 407 and one in Section 408, 407 being the deposit in the Library of Congress unrelated to registration and that the Register has the authority under 407 to exempt a class of work from deposit entirely but he has no authority under 407 to permit the deposits of descriptions or other things unless it be a sculptural or graphic or artistic work or one produced under a very limited copyright. It doesn't seem to me under 407 his only choice is to deposit nothing or deposit everything.

Under 408 he has clearly got the right to provide a deposit by description, but he has no right to require it of you unless you choose to register. Am I right? There is no authority under the existing law to say everything has to deposit, but he doesn't have to deposit everything?

COMMISSIONER PERLE: That's not the way the law reads, Dan.

COMMISSIONER LACY: Where is it not that way?

COMMISSIONER PERLE: The 408(C), "The regulations may require or permit, for particular classes...."

If the Register says, "Register," you haven't registered --

COMMISSIONER LACY: What clause are you reading from, Gabe, I'm sorry.

COMMISSIONER PERLE: 408(c)(1). "Is authorized --"

COMMISSIONER WEDGEWORTH: The second sentence.

COMMISSIONER PERLE: "The regulations may require or permit..."

COMMISSIONER LACY: Yes. I agree that he could do whatever -- say provide a descriptive registration, I mean a descriptive deposit of a description rather than the work itself under 408. He can't require that, though, unless you are registering the work.

COMMISSIONER PERLE: Yes, but they can require registration.

COMMISSIONER LACY: It's merely a two-step process. The Register can require -- he can demand that you register, and with that, demand compliance with the regulations which require that with the registration you have descriptive material.

COMMISSIONER NIMMER: Where can you require registration?

COMMISSIONER PERLE: Mel, where is the provision which says that --

COMMISSIONER NIMMER: You can require deposit under 407.

COMMISSIONER LACY: Yes, but he can't modify unless it is sculptural or artistic work.

COMMISSIONER NIMMER: In 408, it is permissiblethat he can require if there is an election to register.

COMMISSIONER LACY: So to accomplish what George wants, it seems to me that you have to either give the Register the

right to require or alternatively extend it to other kinds of work the discretion the Register now has under 407 with respect to sculpture and paintings and so on. I am not saying it shouldn't be done, but I think it does take some legislation, not just an administrative action by the Register.

CHAIRMAN FULD: As I understand, the committee opts for what has been read but two members seem to take a different view.

COMMISSIONER CARY: One member at least. I don't know about the other.

COMMISSIONER WEDGEWORTH: We did discuss this some time back, but for some reason we never came back to really focusing on it specifically, and I must admit that I never clearly understood the relationship between 407 and 408 as I understand it today. Given that understanding, I do think we need to do one of the two things that Dan just mentioned, which is either give more flexibility with respect to what is deposited under 407 or, under 408, recommend that this be required.

I just feel that if we are going to copyright a data base that there ought to be something that will explicitly describe what it is.

COMMISSIONER LACY: Now you're copyrighting it automatically when you are creating it and probably I think what we mean is, if you are going to retain copyright after publication.

COMMISSIONER WEDGEWORTH: Yes.

COMMISSIONER LACY: You ought to. This would probably take an amendment, 407 C, where the phrase now reads "Where the individual author" -- that is they can provide these alternative modes of registration -- "Where the individual author is the owner of a copyright in a pictorial, graphical or sculptural work" by saying something like "a pictorial, graphical or sculptural work or machine readable work." I think there is something to be said for some bibliographical reasons for having registered published machine readable data bases that would at least give substantial identifying information. I think that the data base people might find that is as useful for advertising.

CHAIRMAN FULD: Does the proprietor have the choice of foregoing an action to go against them for infringement? So it's his choice?

COMMISSIONER LACY: Yes. He does. It is his choice not to do that.

COMMISSIONER NIMMER: Beyond that, he doesn't even really have to forego infringement. It's just that he has a greater burden in establishing what it was --

COMMISSIONER LACY: And a less opportunity to recover.

COMMISSIONER NIMMER: But, isn't the rationale there the problem of a constantly changing data base, the burden of having to deposit every time they insert a new item? Isn't it better requiring that kind of a deposit?

COMMISSIONER LACY: Well, I think we all felt on the Subcommittee, for that reason among others, that requiring the whole data base was impractical and onerous to everyone concerned, including the Library as well as the proprietors. A description of the data base that would indicate what types of data were inserted, and the derivation from what sources over what period, and when it was organized and updated throughout the existence of the registry of such data bases would have some substantial value. Of course, you wouldn't require changing that registration just from the fact that you put more data into the data base. You don't have changing -- you can change the classes of data procedures for that period.

I think it requires some further study and it probably requires consultation with the copyright office as to their general pattern of regulations that are going to be adopted.

MR. LEVINE: Let me just suggest how things operate now in the Copyright Office.

For example, anyone registering a newspaper will send in two copies of the newspaper with an application. The work will be registered, the newspapers will be bulked up and destroyed almost immediately. Books, if they come in, are subject to selection by the Library of Congress and will no longer be retained by the Copyright Office but will go into the general collection of Congress thereby negating

any evidentiary value they may have contained.

Other types of published material are kept for a period of time and destroyed. Under the new law, the Register continues to have this type of authority to do all of those things.

I would say that of the 400,000 plus registrations each year, perhaps 200 are looked at at some point by a member of the public. They are not allowed to make copies from the Copyright Office. To look at a reel of a computer data or a disk of data or a chip of data is impossible because the Copyright Office doesn't have the facilities to look at those things.

The question is, is there, and if there is, what is the social purpose in requiring something that is never to see the light of day by anyone?

MR. APPLEBAUM: I would like to clarify that statistic. Those numbers really refer, I think, to items that have not been selected for inclusion in the Library's own classified selections, the ones that have been retained by Congress.

MR. LEVINE: You mean the 200 that I referred to?

MR. APPLEBAUM: Yes.

MR. LEVINE: Oh, yes, of course. Things that have been taken from the selection for the Copyright Office.

COMMISSIONER CARY: At the risk of repetition, what I am urging is not contradictory to what you said. It's the fact that the identifying material is what bothers me. I

don't say you have to deposit the data base itself, but I realize that it is a burden. I guess what I'm really bugged about is if the Copyright Office can say, "You don't deposit anything," then I'm just doubtful about that and the question that Mel raised about the new additions and so forth. I can only say that the New York Times, which comes out 365 days a year, is registered 365 times a year.

I think the Data Base Sub committee had considered that if you have a data base which is updated every month or every week, then you are going to have to have a new registration so that there is some way of going on record as to what that particular new registration covers. That's all, Mel.

COMMISSIONER NIMMER: I question what value, George, there is really to a general description being deposited if the rationale is in the event of infringement action. The defendant says, "That was not your work. He's now changed it, and I didn't copy from you."

There is no way to know whether that is valid or not unless you have precisely what the plaintiff's work is and not a mere general description. If he is merely registering that he has a data base about race drivers in South Texas, or wherever, that's not going to tell us whether the defendant copied from the plaintiff's data base. The mere fact that they are both about race drivers isn't determinative.

COMMISSIONER WEDGEWORTH: I think the language of 407 makes the best case for what George is raising in and of itself. The questions that we are putting forth is not so much what happens when you go into court but, as you said here, the purpose of this is to provide a satisfactory archival record of what has occurred. This would not be a problem if the Register of Copyrights in all instances chooses the alternative rather than choosing to completely exempt the manufacturerof data bases from any deposit requirement. If, for example, at some point we wanted to compile a publication that would generally describe all of the actively operating data bases in the U.S., if all data bases were exempted completely from that deposit requirement, there would be no real source for that kind of archival record.

I think that that is the significant point from our perspective.

MR. LEVINE: But I think the Library of Congress and the Register of Copyrights have taken the position that the archival value of data bases for their purposes is zero.

COMMISSIONER WEDGEWORTH: Arthur, you still keep talking about the machine and the manifestation of it on the machine. I don't think that's what we are talking about.

MR. LEVINE: No, I'm sorry. I should have spelled it out a little better. By suggesting the regulations under 407 and 408, the Library of Congress is saying we don't want these for our collections. We don't think there is any

archival value to data bases. Now, if they would say to the Register of Copyrights go out and require the deposit --

COMMISSIONER WEDGEWORTH: Has that distinction been made, Ed, between the actual item and the description of it?

MR. APPLEBAUM: I really can't answer that question. It has not come into my accounting.

George, have you been exposed to that specific question?

COMMISSIONER CARY: No, I have not.

COMMISSIONER NIMMER: May I say that as a sort of broad rationale the deposits have always been a twofold situation. One is archival, but archival in the sense, as I understand it, of building up the Library of Congress's materials.

MR. APPLEBAUM: And diffusion of material.

COMMISSIONER NIMMER: Yes, and the other is having some connection with an infringement action.

On the first one, as I understand it, this doesn't mean it has to be that way but, Bob was suggesting a somewhat different meaning of archival --

COMMISSIONER WEDGEWORTH: That is not always true, because we have an extensive bibliography of motion pictures and film strips that have come out of the Library of Congress and that is a very important bibliographical tool. It doesn't bear any relationship to your having the item there. It is describing what actually you created and --

COMMISSIONER NIMMER: You're describing the consequences to the Library of Congress, but you are not describing the rationale of why the Library of Congress was interested in getting a deposit of some materials.

COMMISSIONER WEDGEWORTH: What I am interpreting is what I think is in 407 by archival record. That's normally what --

COMMISSIONER NIMMER: I don't think that's what they meant. It could be what they could mean.

COMMISSIONER WEDGEWORTH: Well, could we move off this question by simply referring the question to the Library of Congress and asking them to be more explicit about their intentions? I think that would make it clearer in the distinction between the device and the record of the activity. I think this is important.

COMMISSIONER CARY: And perhaps some conference with the Copyright Office officials as has been suggested.

MR. LEVINE: We will certainly do that.

CHAIRMAN FULD: How does that leave us?

CHAIRMAN MILLER: I would hate to feel that the judgment as to whether there is a social purpose to be served by having what, in effect, amounts to a registry of data bases be made by the Library of Congress. It may well be a social purpose to such a registry that transcends the particular interest in the Library of Congress. I would think that is a judgment that this Commission should make for itself after hearing the particular slant on the matter of the Library

of Congress.

COMMISSIONER WEDGEWORTH: Well, I think that was what I intended, Arthur, but first of all, there is some question as to what the real intent of the Library of Congress is.

MR. LEVINE: We will get a memo to the Commission before the next meeting.

CHAIRMAN FULD: And does that go back to the Subcommittee the question of how the report should be written?

MR. LEVINE: Well, just procedurally, I think it's probably a small point that would want to be resolved by the full Commission.

COMMISSIONER LACY: Mr. Chairman, I think we are ready for a motion that the staff be instructed on the basis of the summary of the Data Base Subcommittee of the report and the discussions that have been had to draft what, if approved by this Commission at the next meeting, would be that section of the final report of the Commission dealing with machine readable data bases except that on this point of deposit of the data bases or information about the data bases that is explored further with the Library of Congress and the Copyright Office and with persons competent to make a judgment on the social value of the data bases and recommendation to the Commission, specific language, on that point on its next meeting and I so move.

COMMISSIONER PERLE: Seconded.

CHAIRMAN FULD: All in favor say aye.

COMMISSIONER NIMMER: Aye.

COMMISSIONER CARY: Aye.

COMMISSIONER KARPATKIN: Aye.

COMMISSIONER LACY: Aye.

COMMISSIONER MILLER: Aye.

COMMISSIONER PERLE: Aye.

COMMISSIONER SARBIN: Aye.

COMMISSIONER WEDGEWORTH: Aye.

COMMISSIONER WILCOX: Aye.

CHAIRMAN FULD: Aye.

No objections?

That takes us to the next report.

MR. LEVINE: Yes, which is the Software Subcommittee Report.

Mike will summarize that.

MR. KEPLINGER: Unlike the last report, the level of controversy surrounding the issue of copyright protection for computer software has been significant.

As with the previous report, the report which was circulated by the Commission and prepared by the Software Subcommittee was submitted to the public for comment and modification has been made to that report based on the commentary that was received because of circulation and because of subsequent testimony that was heard before the full Commission. The first two pages of the revised report give a brief summary of some of the opinions which are made

in the report and indicate the trend of the recommendations that were made by the Subcommittee.

I think that this revised version of the report maintains the same basic philosophy that was enunciated in the earlier report which has been discussed at length before the Commission. That is that at least for some subset of computer programs, copyright protection is an entirely appropriate method of protecting computer programs, and that the evidence adduced before the Commission indicates that computers are being more and more widely used and that software or programs are vital for their functioning. In fact, the development of micro-computers, as Mr. Borovcy indicated this morning, is changing the directions in which computers are developing.

Coming out here on the airplane, in the United Airlines magazine, in the center, there is a two-page ad for a home computer along with the advertisement for program tapes to be incorporated in these computers that sell for on the order of $20 and $25. They enable you to use the program of the computer, when coupled with your television set, as an aid to teaching mathematics to your children, for playing games, as a musical instrument, to do your income taxes, and balance your checkbook. All this is by using the general purpose micro-processors that were talked about this morning, coupled with the general purpose software that would be developed and sold across the counter such as an

eight-track cassette is sold.

The methods that are currently used to protect property rights and programs include the things that we have heard about. They include trade secrecy; they include patents, and it includes copyrights. It includes contractual agreements and technical measures such as encryption and otherwise limiting access to the data, but for various reasons there are social problems with industrial reliance on certain of these measures. The Subcommittee feels that the interest of society would be best served if reliance could be increased on copyright as a protective mechanism for computer software.

The subcommittee suggests that programs are, in their first instance, creations by human beings. They are sets of instructions which are fixed in a tangible medium of expression. The intent of the recommendation of the Subcommittee is not to protect the process which may be embodied in a computer program as it goes into commerce, but to protect the embodiment of the program, to protect its tangible form of expression, to protect the writing which gives form and substance to the idea.

The responses that the Commission had to the circulation of the earlier report were not unanimous. The report indicates that. However, I think that the balance of the responses were, by and large, favorable to the position

taken by the subcommittee, and they suggest that that support came from a wide range of individuals in the computer industry.

It came from people in independent software houses. It came from major computer manufacturers. It came from academics. It came from, to a certain extent, users.

Criticism of the report came primarily from people not saying that copyright is not necessarily wrong for computer programs, but that other methods of protection would be better. They were either arguing strongly for patent protection, arguing strongly for the status quo of largely trade secrecy protection, or simply saying that some new kind of protection is needed but they didn't know what it was.

The Subcommittee suggests that in the case of computer programs, unlike data bases, a few specific changes should be made in the new copyright law. There should be included in the law a new definition for computer program to be included among the definitions in Section 101 that definition which I will --

MR. LEVINE: Page 20.

MR. KEPLINGER: -- read it "A computer program is a fixation of a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."

That definition is slightly changed from the

version that was in the report previously submitted by the Subcommittee largely because of specific suggestions for change recommended by people in testimony and in letters that we received. It deviates from the earlier one in that it talks about a set of statements rather than a series of statements because some programs may be presented in tabular form, such as those indicated by Mr. Borovoy, where the instructions are not really in a linear series but rather comprise a set put together by different rules. It talks about being used directly or indirectly in a computer to be able to cover both the object and source versions of a program. This was pointed out as a possible problem with the earlier definition by those making comments.

The other suggestions specifically made by the Subcommittee is that there be a new Section 117 to replace the present Section 117 as enacted. The Subcommittee recommends that the present Section 117 be deleted for similar reasons as the Data Base Subcommittee. In this case that leaves a convenient hole for the new Section 117 which would be put in its place: limitations on exclusive rights as applied to computer programs. The intent of that section is to provide a legitimate holder of a computer program with permission to do that copying of the program which is necessary for him to be able to use it in his computer without running afoul of

possible infringement actions since the Software Subcommittee shares the opinion of the Data Base Subcommittee that input of a machine-readable work into a computer constitutes a copying of the work.

A new provision that was added to this Section 117, again as a result of information submitted by letters responding to the previous report, is that there be a right of adapting the program. That was included because certain programs written in higher level computer languages may require very minor changes when they are transferred from one computer to another. The intent is to give the potential users the ability to make these minor changes which would be necessary to adapt to a specific use on his own computer.

The report generated some comments because of its discussion of the preemption provision of Section 301 and that section of the Subcommittee Report has been rewritten. It suggests that the preemption section does not affect the doctrine of trade secrecy per se, but only to the extent that the doctrine of trade secrecy would provide protection against copying. In that case the proprietor would probably have to rely on copyright, but in other cases, requiring confidential disclosure agreements and so forth, perhaps there might still be a legitimate role for trade secrecy.

COMMISSIONER CARY: Excuse me, Mike, if I may. Does

that mean that in effect the report will outlaw trade secrets as a source of protection for copying?

MR. KEPLINGER: What this report suggests is that trade secrecy would be affected only to the extent that it might preclude acts of copying but that trade secrecy law also embodies elements of the Law of Confidence, in the British terms, governing business arrangements against nondisclosure of information.

It may still have vitality in protecting certain kinds of programs that would never be widely distributed ones that are done on a one shot basis or ones that could only be distributed to a very, very limited number of clients.

COMMISSIONER NIMMER: Mike, I don't understand that. Are you saying that to the extent something is called a trade secret law as a label but by virtue of state law does not really require secrecy and simply prohibits copying, it would be preempted? That I agree with. That would be preempted under the existing law. It doesn't matter what label is put on it. It is just another way of getting at the right under the copyright law.

If, on the other hand, you have a state law that does require secrecy in order to recognize something as a trade secret, that is, are required employees to keep the matter secret and not publicly disclose it and, if that's the prevailing requirement within whatever industry or company is claiming a trade secret, then a trade secret law that

made it a violation of that trade secrecy to disclose for purposes of copying or otherwise, I don't think such a law would be the subject of preemption under our new law generally. I don't think it should be the subject of it.

MR. KEPLINGER: I think that's what I attempted to say. Thanks for clarifying it.

COMMISSIONER NIMMER: If that is the case, I don't think any change in the existing law is required.

I mean the existing new law -- I find it difficult to speak of the new law as the existing law. Under the existing law, as I read the preemption provisions, if there is an additional element such as maintenance of secrecy required beyond mere prohibition of copying, then you have something that is not preempted.

Under existing law if we want to preserve that kind of trade secret law, nothing need be done, as I see it, because it is just existing law. On the other hand, if we are concerned about a law that doesn't really require secrecy but merely has a trade secret label, this, in effect, is a copyright protection and then it is preempted under the state.

COMMISSIONER PERLE: Basically, Mel, this was designed to put some legislative history in the report.

MR. KEPLINGER: I think perhaps I misstated the intent. It was not clear why this part was rewritten. It was perhaps unclear before and the attempt was to rewrite the section of the report dealing with preemption to make it more clear

that the result that you suggested is the correct one which would obtain. The Subcommittee makes no recommendations regarding changing the preemption provisions.

CHAIRMAN FULD: How would you suggest it be changed, Mel?

COMMISSIONER NIMMER: Well, I think it is somewhat ambiguous whether you are calling for a different law.

CHAIRMAN FULD: We don't suggest that.

COMMISSIONER PERLE: Well, in the final report, we could say that it is the Commission's feeling the present preemption provision may not be changed because and go on from there.

COMMISSIONER LACY: Well, it seems obvious that under the present law no person or corporation can avoid copyrighting. He has no option on it. He can't help writing down any secret he may possess: the chemical formula for, the combination to his bank vault. Whatever he does any secret so written down becomes copyrighted. Now, unless trade secret law is preserved in an old form and it is clear that there was no intention of Section 301 to destoy that internal secret -- this of course, far transcends the question of computer software--

of course this doesn't destroy the doctrine of secrecy with respect to unpublished material simply because it is a fixation of tangible form.

CHAIRMAN FULD: It should be phrased that way.

MR. KEPLINGER: That's it. The error was perhaps in my explanation rather than the written document.

MR. LEVINE: Jeff?

Are you through, Mike?

MR. KEPLINGER: Yes, unless I get any other questions about the document.

MR. LEVINE: Well, why don't we hear from Jeff first.

Jeff is minority counsel.

(Laughter.)

Well, we are not absolutely sure of that, are we?

(Laughter.)

MR. SQUIRES: I know some people received Mr. Hersey's paper last night and some this morning, but some had received it last night as well. I will be very brief because I don't want to try and represent his position.

CHAIRMAN FULD: Why not?

MR. SQUIRES: Because I don't want to be caught between him and you.

(Laughter.)

As those of you who have seen the paper know, he retracts his suggestion that there be a new law geared directly toward the protection of computer programs, and would instead recommend that the recommendation of the Commission be specifically to exclude computer programs from the subject matter of copyright by an amendment to the law or the necessary legislative history, and I am not sure

whether that is clear but I think that is a matter of procedure to be worked out.

His great concern is one that was expressed at the last Commission meeting, or that he felt was expressed at the last Commission meeting, and to a certain extent this morning, and that is that copyright, as he has said before, is not an appropriate form of protection for the type of creative work that goes into a computer program and the product that is the result of that work. Mr. Hersey believes that the product that is a computer program does not contain protectable expression in the sense that we talk about the protectable expression in the copyrightable work, but that rather the expression, whatever there is in a computer program, is totally inconsequential, that a computer program is created, written to perform a function, and that the expressive elements are not in the mind of the programmer, the writer; rather, he sits down to prepare something which will perform a function.

He directs efforts, he or she directs their efforts, to the goal of making the machine operate. I think his ultimate concern is that with a program, perhaps also with the circuitry in the chip that Mr. Borovoy explained this morning, the considerable creative effort that is involved does not result in something which, as Mr. Miller discussed, communicates with a human being.

I think Mr. Hersey believes that there is something

to be protected about the concept that copyright protects works that convey communication to people.

CHAIRMAN FULD: Where is that found? I mean, I read his paper. Where do you find the need that there be communication to individuals?

MR. SQUIRES: I think you can extract that principle from the history of copyright legislation and some of the case law. The word communication is rarely found expressed exactly as that, in the case law, but you look at the constitutional provision and some of the cases which Mr. Nimmer could recite much more readily than I could. A case decided by Judge Jerome Frank was perhaps a case which expressed, as well as I know, the distinction between that which copyrights protect and that which patents protect: the difference between a process or a mechanical invention and a writing which conveys human thought. I think that that is Mr. Hersey's position at any rate.

He is greatly concerned, picking up from the last committee session, that in this area of law we protect the distinction, the Commission protects the distinction, between works which convey ideas from people to people and works which are meant to interact directly with and control machine operations. I know Mr. Hersey feels very strongly that the book that was distributed to the Commissioners written by Mr. Weizenbaum be thought about, be pondered by the Commissioners, because, and he asked me to relate this to

you, he believes that consideration which has been characterized as humanistic on his part is that that distinction between man and machine never let become hazy; that this is one way of reenforcing that distinction in the law of copyright, a small part of the body of our law, that was his overriding concern.

I don't know if I really am competent to answer questions on his behalf but I would try to answer questions on the basis of discussions.

COMMISSIONER CARY: Mr. Chairman.

Jeff, how does he answer this? I had also thought that copyright protected the expression of an author and did not require that that expression be communicated to anybody whether it is machine or man.

MR. SQUIRES: I think you would answer it that it would be required that work be capable of conveying information. That the works which are deposited in the copyright office are works, are examined, as you know, Mr. Cary, that an examiner picks them up and reads or peruses and understands to a certain extent what it is that is conveyed in that work and that a work which is not intended to or competent of being perceived and, at some level being comprehended by a human being, is not the type of work for which copyright is intended.

COMMISSIONER CARY: Well, it seems to me it's difficult, and I am just making this hypothetical, it is difficult to

argue that the programmer who sits down and prepares a program which is built into a computer has in effect been an author of that particular expression of his ideas. Now, whether it is ever used or whether it is put into a machine to be brought and made manifest to man, does it really make any difference? That's the point that bothers me in his argument.

MR. SQUIRES: I think he would only say that that work, whatever expression it is, is contained in that work is expression only in the sense that it is refined in order to make the machine operate.

COMMISSIONER CARY: I have no further questions.

MR. SQUIRES: There were several other sections in his paper which you will read. I would only like to briefly refer you to them and that is that I think he is concerned with the lack of evidence that has been brought before the Commission that there really does exist the need that has been discussed for application of copyright to computer programs; Mr. Borovoy's considerations are certainly to be put into the mix, but that Mr. Hersey would certainly say that copyright was not the right angle.

I think he is also concerned, to some extent, that trade secrecy has taken on negative characterizations which aren't necessarily applicable to the operations of companies in the real world and that whatever the Commission were to decide to do, and I'm sure Mr. Borovoy's candid

discussions of his company's practices fits this pattern of doing everything that a company manufacturing a good in commerce would do to maintain a competitive advantage, including keeping that which it can keep secret secret, it will do so. The existence of copyright protection for computer programs wouldn't change that, I don't believe, not materially after that.

COMMISSIONER NIMMER: May I interrupt? I am trying to address the fundamental section. You alluded to John Hersey's question of whether copyright is necessary.

I simply want to observe that in the introduction to the software report on the first and second pages where you have a list of the indisputable statements about computer and copyright, unless I missed it, apparently there is no mention there of the issue which is discussed at the beginning of Page 5: Why protection?

In other words, at the beginning of Page 5 the argument is made that protection is necessary, because otherwise, people will not be adequately compensated for making computer programs or the cost will be excessive, etc. Nothing of that sort is reflected in these initial statements. It's sort of assumed that some kind of protection is necessary and the only question is what is the most appropriate kind of protection.

Maybe that was intentionally omitted on the grounds that that was not a statement that was indisputable

even though the committee believes it to be true or I wonder why it wasn't there.

COMMISSIONER PERLE: Oversight.

CHAIRMAN FULD: He thought we had enough without it.

COMMISSIONER PERLE: I guess we'd have to put it there; wouldn't we?

CHAIRMAN FULD: It would be desirable, Arthur.

MR. LEVINE: Yes, yes.

CHAIRMAN FULD: We want to have discussion of this in the absence of Professor Hersey?

MR. LEVINE: Well, I think it would be useful to get some idea of what concerns still are related.

COMMISSIONER NIMMER: May I try? I am torn on this issue, and I regard John Hersey's comments as impressive, but perhaps more poetic than I'm inclined to follow.

I'm not so concerned, maybe I should be, about whether this is humanistic and sufficient protection for things human as opposed to things nonhuman. What does bother me still is, is there any line to be drawn if we say that computer programs are writings of an author? If so, then is there anything within the realm that would be the subject of patent protection which may not likewise be the subject of copyright protection. Putting to one side that patent requires novelty and nonobviousness and just looking at the subject matter of patent and the subject matter of copyright, it seems to me that patents involve instructions

to machines in one way or another and invention is determining a matter in which machinery is to operate and, in that sense, is an instruction to a machine.

My initial question is, am I missing some other line whereby copyright would include computer programs but would exclude other kinds of scientific inventions? If the answer is no, that it would include all, why shouldn't it include all, then I am not sure that's wrong but I certainly have some question about it. There is, first of all, the fact that simply on a formal level the Constitution separates out patent and copyright.

I don't know that that is all that important, but I guess the substantive issue is that we know that patent protection is more limited. We limit that monopoly. It is a greater monopoly in a sense because it protects against any similarity whether there is copying or not. We limit the application of that monopoly by requirements of novelty and nonobviousness.

CHAIRMAN FULD: Isn't that the answer then?

COMMISSIONER NIMMER: Well, do we, from a social standpoint, do we want to apply a monopoly that is being withheld from the patents from the sphere --

COMMISSIONER PERLE: Whoa, what monopoly? The only monopoly that we are asking for here in copyrighting --

COMMISSIONER NIMMER: It's a limited monopoly, I understand that.

COMMISSIONER PERLE: Not even monopoly. All we are saying is, don't use my words. Don't use my expression. Use the idea.

COMMISSIONER NIMMER: May I finish? Well, you can quarrel with the use of the word "monopoly," there are various meanings of monopoly. To my mind, it is a kind of monopoly in that it says I have exclusive rights to this and I created it and do not copy from me. I think copyright is a kind of monopoly, a justified monopoly, a useful monopoly, and one recognized by the Constitution as being proper but nevertheless, because it is proper doesn't mean that it is not a monopoly, a qualified one, a limited one, but nevertheless one, as I define monopoly. You can define it differently if you like.

CHAIRMAN FULD: It's an Alice In Wonderland syndrome. The word means what you say.

COMMISSIONER NIMMER: So the question I'm putting and it is a question, I'm still torn about it, is, if we are going to encompass the whole scientific sphere and business sphere and everything else in the realm of copyright, provided only that it is put down in tangible form and is original, and provided that it has the limited monopoly in that it only prohibits against copying not against independent creation, do we want to take that step which, it seems to me, is a considerable step beyond what at least has been explicitly acknowledged up until now? Do we want to do this

and are we doing it with our eyes open as to what the consequences are, or is there a line to be drawn short of that?

This is my question.

COMMISSIONER PERLE: Well, Mel, I think if I understand you correctly, you are reopening the question of whether copyright protection should extend to a description of a machine as opposed to the machine. Clearly, if I write up the way a patentable printing press works, if I write a set of instructions for that or a textbook, I am entitled to copyright protection on those writings. That doesn't protect the machine. So, in a sense, copyright in the sense that you are talking about, had been applied to the entire world of science and business and everything else.

COMMISSIONER NIMMER: Well, we get into this hard analogy because it is all analogy but it seems to me that -- I agree with you that copyright can be claimed from prohibiting someone from following the steps of that description in making the machine; right?

COMMISSIONER PERLE: Correct.

COMMISSIONER NIMMER: Yet and isn't that in a sense what the computer program does?

COMMISSIONER PERLE: But, it doesn't prohibit someone else from following those steps and expressing them in his own or her own words even if those words are the same as long as there has not been copying.

Now, I think that we are all troubled --

COMMISSIONER NIMMER: No. Now, you are going to a different point. Now let's go back to your point of describing a machine.

Suppose you have a description of a machine and suppose you copy it word for word. That's an infringement, but suppose I take your instructions, I don't try to put them in my own words, I take your precise instructions and I borrow those instructions and do it. That's not an infringement; right?

COMMISSIONER PERLE: Right.

COMMISSIONER NIMMER: And yet, if I take the exact words of your computer program and follow it by having the machine do it, that is an infringement.

COMMISSIONER PERLE: No, it is not. It is not an infringment to perform the process by application of the program to the machine. It is an infringement to copy the program. It is an infringement to talk about what Mr. Borovoy was talking about this morning, as I view it, to copy a program.

Now --

COMMISSIONER NIMMER: Well, at this point we differ. I think the difference between copy and perform or activate or do vanishes.

COMMISSIONER PERLE: I don't think so. I don't think so. I think one of the things that troubles me, and I think that

is behind what you are saying, Mel, in a sense or an extention, is that right now we are dealing with that sort of animal where clearly some parts of it are in anybody's mind, with one possible exception, copyrightable.

A flow chart of a program is copyrightable. Nobody is going to argue with that. As you get further and further down the line in a transmutation into a different form of expression or a different medium of that flow chart starting with the flow chart, going to this, and ending up with a seven-tiered chip that nobody understands anyway, it gets more and more difficult to say, "That's a writing. That's a machine. That's not a writing, it is some other animal."

I guess where we are at is that, yes, some things are clear, others are fuzzy, and at some point in time one of these animals shouldn't be subject to copyright protection because what it really is is something which is a different animal that we don't know today.

What I'm getting at I think is that, part and parcel to the subcommittee's report, has to be a recommendation that we try to anticipate the future. Our ouija boards and our crystal balls didn't work out all that well, and that even as there are provisions for review, after a period of time, there should be review of this to see if that which we are calling a program, five or ten years down the line, shouldn't be called something else.

CHAIRMAN FULD: Dan?

COMMISSIONER LACY: Well, I think we shouldn't try to reach any conclusions in Mr. Hersey's absence but I might make a few comments.

I figured we probably would all be in agreement that if the 1976 law, the one that just went into effect, remained unamended, computer programs would probably be copyrightable under it. The argument advanced by Mr. Hersey is to amend that act so as to remove them from the copyrightable status they now enjoy under it.

One might offer several reasons for doing this. One seems to me that he conceived of these as instructions to behave in a certain way, or for a machine to behave in a certain way, rather than a creation per se, but one could hardly view that as an objection to copyright. A musical score, for example, is an instruction as is a program. It is not the work the author envisioned, which is a succession of sounds. It's a program to instruct someone in a piano score that if certain keys on the piano are depressed in a certain order and in a certain time interval with a certain rhythm, and a certain force, then there will be created the work that the author envisioned.

You could say that it is not copyrightable because it is an instruction only to a machine and not a human being, but of course, a musical score can be an instruction into a machine, as when it's put in the piano roll form and it instructs the piano to operate without human intervention

to perform the created work and indeed with modern electronic synthesizers and so on, you could program them to produce the particular sound with a wide variety without human intervention. One could say, and John does, that yes, in all of these cases, however, the only purpose of this kind of recognizably copyrightable program, the musical for example, is to create ultimately again the work the author originally had in mind, a succession of sounds that he had -- envisioned I guess is the wrong word -- conceived.

I think we might think of programs -- he would say that the author doesn't know what the outcome of the use of a program is going to be, he doesn't have any work in mind that is going to be created by the operation of a program as he does have a work in mind that is going to be created by operation of the musical score, and that is the essence. The essence of most computer programs is that they yield an unforseeable result because you want to see what happens if certain data are treated in certain ways, but I think we can agree that certain types of programs are clearly copyrightable.

For example, it is quite customary for a medical authority to write out a profile for the conduct, let's say, of the physical and medical examination of a patient that starts out by saying you take Step A, if the result of Step A is X, you proceed to Step B, if it's Y, you proceed to Step C, and if it's C, you omit X. For example, you might

start cut by taking his blood pressure, if it's above a certain limit, you proceed with certain other steps in the examination. If it's below a certain limit, you proceed with certain others. If it's in between a normal range, then you go ahead. Indeed these are quite common principles for medical examination.

Now, it is quite possible to conduct these examinations by a computer operating laboratory equipment and the program could instruct the computer quite as it would instruct the intern to take these same steps and come out with an outcome of the report of the condition.

It doesn't seem to me there is any possibility of not conceiving that as a copyrightable work if an intern is using it. I cannot see any reason for losing its copyright if it's carried out by a machine instead of by a human being.

It is true that one might say that at a certain stage this set of ideas has been incorporated into hardware, as in a hard wired installation in the Amana, where it's no longer, per se, a literary work, even though it may embody one, but this is a commonplace of copyright law under old law in which a phonograph record was not copyrightable, a piano roll was not, because these were just mechanical adaptations. The musical composition that was embodied in it, didn't lose its copyrightability because it moved from a handwritten score into a succession of holes in a paper tape

or set of magnetic deposits on a tape cassette.

I'm simply not persuaded by these arguments and I think his fundamental thrust that it is culturally barbaric to harness poetry and computer programs in the same legal harness, I understand the emotion, but it seems to me no more persuasive than saying that they both shouldn't be carried in the United States mail with the same effect.

I simply regret, because I am deeply fond of John and have profound respect for his intelligence, that I have to say I find it unpersuasive.

CHAIRMAN FULD: Anyone else wish to make comments?

COMMISSIONER MILLER: I have at many meetings carried the ball with regard to John, and I just don't see any necessity repeating my positions on this.

COMMISSIONER NIMMER: Well, I want to put one more thing on the record.

Another aspect of it, but the same thing, going back to it as the Baker vs Selden decisions, which I have often quarreled with in the past...but I wonder if it makes some sense going back to the analogies given by Gabe and Dan of writings that are clearly, although they are utilitarian instructions, nevertheless, the instructions per se are recognized as literary works and protectable.

We go back to this distinction of Baker vs Selden, the Supreme Court case of the last century, but that has been carried on as have a number of cases in this century

and that in my opinion is implicitly carried over into the new law which is not necessarily determinative for us since we are to say what the law should be and not what it is. The distinction made in Baker vs Selden about the distinction between copying for purposes of use and copying for purposes of explanation, well, it's true that by virtue of the nature of a computer there is copying if we take the new definition of copying -- that the input is a kind of copying -- but it is copying, is it not, for purposes of using the program not -- and here we come to John Hersey's point -- not for explanation to human beings, but for use in a machine? In Baker vs Selden, copying for purposes of use, of utilitarian use, is not an infringement. Copying for purposes of explanation to human beings is an infringement. Now, this is just a lawyer argument that one can take or leave and I'm not necessarily wedded to the Baker vs Selden distinction, but again, it points up to me what is the underlying problem I think we should be thinking about. That is, are we according a kind of limited monopoly area beyond what we want to?

Now, we have looked at computer programs and have tried to decide whether this is an area that deserves some protection, and if so, whether it should be copyright protection. I have no great quarrel with that, really. I am concerned about where that points us in the area of copyright, generally, unless there is some line to be drawn.

The design for a locomotive is not copyright. The design, in the sense of if you follow the instructions for creating a locomotive, that isn't copyright but patent, which require greater standards of novelty and nonobviousness and so on.

Are we going over into an area the depths of which we have not fathomed?

COMMISSIONER LACY: Mr. Chairman, pardon me. In response to Mel and probably to give a thought to something that Gabe said, I'd like a moment.

I wouldn't agree with Gabe, though the difference may be academic, that we are not concerned with protecting the use of a program to operate a machine but only with copying it. If so long as we assume that you can't use it to operate a machine without making a copy, this becomes accidentally an indistinguishable. In point of fact, the constitutional provisions give to the author, the inventor, the exclusive use of his writing or discovery and not merely the exclusive right to copy it.

Copyright law has recognized that different types of copyrighted works are used in different ways and different exclusive rights needed to be given to the author. Until the 1950's they recognized that the important right with respect to a drama or speech or sermon intended for oral delivery or a musical composition was the right to

perform it or perform it publicly for profit. In a lot of other literary works, the important right was to copy and only that right existed. It wasn't until 1954 that the right to perform a nondramatic literary work was granted.

We make all sorts of distinctions. We don't give any exclusive right to bake a chocolate cake by performing a series of steps from a copyrighted recipe, but we do give an exclusive right to sing a song by performing it publicly for profit, by performing the steps prescribed in a musical score. It seems to me that there is great freedom to the Congress if they wish to give to a proprietor of a copyrighted program an exclusive right to use it to operate a computer. In fact this is the essential, I assume the important right, that is a right that has to be given if we can give it by virtue of giving also the exclusive right to copy, then fine.

That is the important thing.

COMMISSIONER PERLE: I was talking about the first instance.

CHAIRMAN FULD: Yes.

Rhoda?

COMMISSIONER KARPATKIN: I have a question. The Public Interest Economics Group, in its report, has some concern about -- it's stated on Page 13 that "The major hardware manufacturers appear to have a very substantial monopoly

position and measures which would accelerate their displacement by independent producers should increase overall economic efficiency to the ultimate benefit of the consumers." They went on to recommend with respect to the software that measures should be taken to eliminate the existence and danger of monopoly power in the software field. Then they made some specific recommendations.

I was wondering if they were considered in the development of this report?

COMMISSIONER LACY: As I remember their recommendations, these were consistent with it except for their recommendation that hardware manufacturers could not be able to get a copyright on the program. As I recall it, they were recommending copyright as a mode of protection that would give an independent producer a better opportunity to compete with the larger hardware and software producers who could sustain a monopoly position by having programs peculiarly adopted to his hardware.

I think it was consistent except for that one recommendation about denying to a manufacturer of a main frame computer the opportunity to copyright a program, which I think is open to constitutional question.

COMMISSIONER PERLE: As I recall, the report was addressed to monopoly in terms of economic monopoly rather than the limited monopoly --

COMMISSIONER KARPATKIN: That's right.

COMMISSIONER PERLE: -- of copyright.

COMMISSIONER KARPATKIN: That's right. In view of the difficulties and expense of antitrust enforcement, if there is some opportunity to deflect monopoly growth or to nip it in the bud, perhaps this would be an excellent opportunity for that possibility to be considered.

COMMISSIONER PERLE: The subcommittee --

CHAIRMAN FULD: Didn't that group recommend copyright protection?

COMMISSIONER KARPATKIN: It recommended denial of both trade secrecy and copyright to large hardware manufacturers, statutory forcing of hardware manufacturers to spin off their software operations, antitrust litigation to force hardware manufacturers to divest themselves of their software activities, and compulsory licensing with regulation of prices holding them down to competitive levels.

CHAIRMAN FULD: But not the preparation of software material -- computer software. Didn't they recommend copyright protection?

COMMISSIONER KARPATKIN: Yes, with these exceptions.

CHAIRMAN FULD: Yes.

COMMISSIONER WEDGEWORTH: If I recall, there wasn't much discussion of it. The Commission felt that it fell outside of the scope of its charge. But I've thought about it in the meantime; I've not been persuaded that these computer software products were not copyrightable. I

think that this question of the increasing merger of our concept of software with the hardware of the computer may bear some additional consideration. The only thing that I have come up with, it doesn't really answer the question, but I think will be important for future considerations, is that we may want to recommend that we have a provision in the proposed new 117 of the Software Subcommittee Report that would be similar to the 108(i) that would mandate a review of this such that if it became clear that the fears that are being expressed by Mr. Hersey and the fears that are being expressed by some of the people who are concerned with protecting whatever it is they want to protect in software become more clear in this review. Then there is the option to either develop a new statute to cover those matters or to say that those fears did not materialize and the copyright provisions as recommended by the CONTU Commission continue to be appropriate.

CHAIRMAN FULD: Yes.

MR. BOROVOY: Just one comment that may be helpful to the Commission and that is, if the most troubling aspect is the copying versus use aspect in the computer, almost invariably when a computer takes a program it has to copy it because the computer can't operate on a program from a tape or from a disk or from a cartridge, in the case of a TV game.

In order for the computer to operate, it normally has to absorb this program into what is called RAM, Random

Access Memory, and that has to be by definition a copy of the program. So even if the prohibition is against copying as opposed to a prohibition against use, that would still be adequate protection.

COMMISSIONER PERLE: That is not a basic concern. That is my inartistic way of saying that the primary -- the first threshhold concern is copying. Once you have a copyrightable product, then necessarily you get all of the rights of the copyright proprietor.

MR. SQUIRES: In light of Mr. Borovoy's statements and Mr. Lacy's concern, it seems clear that the sole function of the computer program is to operate a machine.

Now, that may be an overstatement, but it seems to me that that is the sole function and use implies copying. You cannot use a computer program without copying it, therefore, granting copyrights to computer programs may bootstrap them a level of control beyond what it would be socially desirable to grant a computer program, because you are talking about protecting a very small amount of that computer program, the expression; but the effect, because to prevent copying is to prevent use, is to prevent the use of the process that a computer program is and embodies.

Point 1 and Point 2, very briefly, Judge Fuld asked about communication and where it can be found in the law, and I said not easily. I would only like to say that not easily because it has so long been understood that it need

not be said that copyright was a protection for publishers and authors, linked together originally for very limited sorts of production, for books or a poem, and as the means of creation and dissemination. The media grew and so did the things that the copyright protected. Never before has copyright, to my knowledge, protected something which was not the embodiment of the communication to a person, and I would like to be corrected by people who know more than I.

CHAIRMAN FULD: You may correct him.

COMMISSIONER PERLE: A phonogram is nothing but a set of instructions to a machine, activating a machine. There is no question about the fact that the music which comes out is communicated but the phonogram itself communicates only with the machine; but this is normal. I mean it is just so basic I think we start thinking about ultimate rather than intermediate steps.

COMMISSIONER NIMMER: But that gets us back, does it not, to another possible line to be drawn, one alluded to previously, namely the mere fact that you are communicating with a machine rather than with a person does not, should not, in itself preclude copyright protection. Looking to the phonograph analogy what happens there is you do have communication with a machine which then produces a result which is a conventional kind copyright work. Putting it more artistically, it may be found among the types of works listed in Section 102. It is a literary work or an

artistic work or musical work, et cetera. In other words, if the computer program gives instructions to the machine and following those instructions the machine then produces or is capable of producing a literary work or a musical work or any one of the other works enumerated in Section 102, that is where one could say that kind of computer program is the writing of an author and should be protected. But if, on the other hand, the computer program in speaking to the machine produces instructions to an automobile as to how rich a mixture of gasoline should go in the engine or produces other ultimate results which do not fall within the Section 102 category, then that computer program falls on the other side of the line. That is a possible line to be drawn, and I ask the Commission to at least give it some thought.

CHAIRMAN FULD: Arthur.

COMMISSIONER MILLER: There shouldn't be any doubt that the Software Committee Report conceptually takes a major step beyond history, if you say that never before has copyright really been conceived of as giving protection to a work that does not directly or through the intermediation of a machine communicate something to a human being. The phonograph record indirectly communicates sound which is a transmutation of a series of notes originally conceived by or created by a human being.

None of us should be under any illusion that on

the facts the Subcommittee report will do something that's never been done before. In my judgment that's neither good nor bad. We can't condemn it simply because it's never been done before nor should we praise it because we are doing something that has never been done before.

I suspect we are really at the point, and I think all I'm doing is turning Mel's last statement around, we're at the point where we should examine the processes and the consequences of doing that which had never been done before as to whether we want to take the position as a Commission that under some neoclassicist view of culture, copyright should not be extended to writings that communicate to machines that produce results as opposed to further transmit information to people or whether we want to say copyright in mid-Twentieth Century America has as its primary function the protection of intellectual and creative and artistic and inventive work.

In some forms when that creativity is of a certain magnitude we will give it a patent and we will create a substantial blockage to others to prevent them from doing the same thing. When creativity does not reach that particular level but is nonetheless creative and in one of its transmutations is a writing, we will give it a different kind of protection even though we understand it is not directly or indirectly communicating information to anybody. It is producing a result.

Now, from my perspective, I reject what I in no sense pejoratively mean when I say a 19th or 18th Century cultural bias for words or communicating people-to-people with or without the intermediation of a machine. If somebody through writing, creates a product which can be interpreted by humans in one of its transmutations and interpreted and exploited by a machine, but not by a human, in another of its transmutations, but I can nonetheless say this is a writing of an author, I come to the conclusion that unless it can be demonstrated -- -, and this is Mel's concern, I think -- that in effect it is creating a patent, we should protect them. To me the primary thrust of the constitutional clause set in its setting as modified by changes in society is to protect the work product of an author through his writings.

There is nothing in that clause that says to me that the ultimate utilization of that writing must be by a human being using sensory perception. If somebody writes a telephone book and in the front is a 25-page description of how to use this telephone book which says to take the first letter of the last name and turn to the page, etc., etc., etc. Next to take any one of your fingers that will fit in any of the holes on the dial, look for the hole that matches, there is no doubt that that is a writing of an author entitled to protection.

If somebody wants to create a computer program that does all that for me including the directory so that

all I have to do is type in Nimmer, Mel, and the machine operates through that set of instructions to dial Mel on the phone for me, I don't see why that shouldn't be given a protection we call copyrighting not against anybody else writing his own set of instructions. Even though that program is not communicating anything to a human being, it is a writing of an author in one of its manifestations. It is a work of utilization in another of its manifestations.

Now, if you reject that, that's what we should be talking about. I don't think we should be talking about cultural biases. I find that elitist in the extreme. Nor do I think we should, at present, worry about the Baker and Selden idea expression of patent copyright because I think we've heard enough testimony in this Commission which tells us we are not creating blockage in writing programs by recognizing computer program copyright. If it turns out that there is blockage, then I suppose we should back away.

COMMISSIONER LACY: I would agree with all of that except, Arthur, wouldn't you say it's not the Subcommittee but the Congress in the 1976 Act that did something that has never been done before and that we are simply recognizing and calling attention to it and acquiescing to it?

COMMISSIONER MILLER: I suppose. I say, as I said before, I don't feel this Commission is bound by what the Congress did in 1976. I think if we can perform a function--we have many functions of course--but one function is to

explicate this dialogue that we have been having for several months and to say yes we are going into this with our eyes popeyed. We know exactly what we are doing and we know that in a real sense we are changing the conception of copyright to focus more on the creative end and the writings of an author and less on the -- you know we are really, in a sense, we are arguing White, Smith and Apollo, today. We are just backing away from that.

MR. LEVINE: One has a sense in reading, for example the old Oscar Wilde case, when you read it you say to yourself, "Well, why in the world with 20th Century perspective was the court stuggling with that question?" It was a --

COMMISSIONER PERLE: You ought to tell him what it is.

MR. LEVINE: It was, I forget the name of it, but it was a question of whether photographs --

COMMISSIONER NIMMER: Burrow-Giles vs Sarony.

MR. LEVINE: -- whether a photograph was the writing of an author. It was a technology that was not in existence at the time the Constitution was written and one of the questions before the court was does the Constitution extend this far.

Now, there is that question today, no one has any doubts today, that photographs are copyrightable and one sort of has the feeling about this discussion that in 2070 someone will look back and say, "That was surprising that was an issue in the late 20th Century." I guess what

Arthur said struck me that way.

COMMISSIONER NIMMER: It does demonstrate the importance of being earnest about it.

(Laughter.)

COMMISSIONER CARY: Mr. Chairman, I would like to indicate my very general and complete agreement with what Professor Miller has just said. I'd like to add the thought that in view of the fact that since the Congress in their committee reports has pointed out in several sections 102 and 106, for example, that it believes that the present law, that is the law before 1976, the 1909 law, would permit copyrighting of computers, tapes, and programs. It seems that this Commission, if it wanted to do what is being suggested by Commissioner Hersey, we would have to, in effect, recommend that 117 be deleted and a new provision added explicitly saying that we don't think the computer programs should be copyrighted in the future.

CHAIRMAN FULD: Anyone else have anything to add?

COMMISSIONER KARPATKIN: On another point, Mr. Chairman, I think the language of the report if when it referred to creators or proprietors, shouldn't use exclusively the male pronoun -- he or she or they or something.

CHAIRMAN FULD: We will put a footnote of that.

COMMISSIONER KARPATKIN: No, I don't think the footnote would revise it.

COMMISSIONER PERLE: That really goes to the heart of

the matter.

CHAIRMAN FULD: It will be done.

If there is nothing more.

MR. LEVINE: A couple of things I would like to mention as best I'm able.

The photocopy Subcommittee met yesterday and discussed a report prepared by Bob Frase. We will distribute that to the members of the Commission who are not members of that Subcommittee and that will form the basis for tomorrow's discussion, although I suspect it is not essential that one have read that report before.

COMMISSIONER NIMMER: But it could be helpful in getting Commission input on the report such as it is up to now.

MR. LEVINE: I just feel that for those who have other plans --

COMMISSIONER NIMMER: I don't see why people should step out tonight.

CHAIRMAN FULD: Despite that, we will get it.

MR. LEVINE: Yes, we are passing it out now.

CHAIRMAN FULD: It is 4:00 o'clock. May I suggest that we meet tomorrow at 9:30 and that we start really at 9:30 in order that some of us, not I, might want to get away early.

We recess until tomorrow at 9:30. The meeting is adjourned.

STATE OF CALIFORNIA)
) SS.
COUNTY OF LOS ANGELES)

I, ERNEST M. SANCHEZ, a Notary Public in and for the State of California, do hereby certify:

That the foregoing transcript was recorded stenographically by me at the time and place herein named, and was thereafter reduced to typewriting under my direction and supervision;

That the foregoing comprises a true and correct copy of the proceedings had and reported by me.

I hereby certify that I am not interested in the event of the action.

IN WITNESS WHEREOF, I have subscribed my name and affixed my seal this 3rd day of February, 1978.

Ernest M Sanchez
NOTARY PUBLIC IN AND FOR THE STATE OF CALIFORNIA

OFFICIAL SEAL
ERNEST M SANCHEZ, JR.
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My Commission Expires Nov. 17, 1980

CHAIRMAN FULD: Well, it is 9:30. We will start with Carol's report.

MS. RISHER: At the CONTU meeting of October 21, the AAP and the Authors League both said that they were very much in favor of meeting with the Library Association to negotiate additional guidelines, and we asked CONTU if you would consider interceding and helping bring the groups together. The Council of National Library Associations at that meeting said that they were not interested in negotiating guidelines at this time. We understand that CONTU's Photocopy Subcommittee also agreed unanimously not to try to get the three parties together to negotiate.

In the absence of guidelines, it came to the attention of the Authors League and the Association of American Publishers that librarians out in the field that had to implement the new law, were having difficulty and really asked and needed some type of numerical guidelines. So the Association of American Publishers and the Authors League prepared a document which I believe all of the Commissioners have received.

CHAIRMAN FULD: We received it.

MS. RISHER: In this document, it is a three-part document, the first part is a section which apprises -- is a discussion of Section 107 and 108 as they relate to corporate libraries; the second, is a provisional numerical guideline that can be used by corporate libraries; the third

is a question and answer document.

I would like at this time to introduce into the record this document "Photocopying by Corporate Libraries," and also to state that there is another document we are working on now which is "Photocopying by Academic and Public Libraries" which we would also make available to the Commission.

It is our hope, the Association of American Publishers and the Author's League, that these documents will encourage the Library Associations to meet and negotiate guidelines as suggested and urged by both parties of Congress.

CHAIRMAN FULD: You want us to receive that as one of the documents for the record?

MS. RISHER: Yes.

CHAIRMAN FULD: I would think it is all right.

Is there any objection to that?

There being none, it will be received.

MS. RISHER: Thank you, very much, Judge Fuld. I have extra copies if anyone did not receive them.

(The document referred to was received and is attached to the record.)

COMMISSIONER WEDGEWORTH: Just a comment for the record.

I just like to say that Commissioner Wilcox and I have been quite interested in trying to ascertain exactly what the level of interest and education that the librarians

out in the field do have on the copyright law.

Along these lines, we stopped at Stanford University on the way down to this meeting. We talked to the university library community there. We were quite pleased to find out from them and reporting on their colleagues that they do have a number of questions about the copyright law most of which are in areas that we actually have not anticipated. Our impression is that they are quite knowledgeable and quite sophisticated in their approach and have already adopted guidelines which they say are not unique to their campus but many of the universities and colleges in the area have done so.

The kinds of questions that have tended to come up are: What do you do with copies that were made prior to the advent of the new law that they may wish to use? There were no questions about numbers of copies that they can make under certain circumstances. They seemed to be fully confident of their ability to handle them.

CHAIRMAN FULD: The receipt of this document will be helpful.

May I ask Bob Frase to give a resume, if it's possible, of the report that's been -- the memorandum that has been submitted to us on photocopying.

MR. FRASE: At the November 18 meeting of the Photocopying Subcommittee in Cambridge, the committee considered an outline for the -- for a draft of the

Photocopy Sub committee report which is in a sort of general analytical background nature up to the point where the committee would want to insert its recommendations. I asked the staff to draft a report based on that outline, and you have a copy.

The committee considered it in the preliminary way yesterday. I would be grateful for comments of other Commissioners if they may have any.

I might say that this draft was finished before I left on vacation on December 23 and had some editing after, some of which I agree with and some of which I don't. We'll get that straightened out.

CHAIRMAN FULD: It's pretty much a reflection, isn't it, of the King Report?

MR. FRASE: No. I'll go through it and indicate what's in it. I'd like -- I've corrected on the copies that have gone into the Commissioners, other than those who were on the photocopying committee, one a serious error in the column heading on one of the tables, and I wanted to get that straight.

CHAIRMAN FULD: Would you talk a little louder, Bob, please.

MR. FRASE: Now, I wouldn't attempt to summarize substance but the first section deals in a sort of historical way with the Congressional action on the photocopying provisions of the Revision Bill and where this left CONFU.

The second part, beginning on Page 4, is an attempt to summarize the provisions of the 1976 Act relating to photocopying including in detail the CONTU guidelines.

Part 3 deals with what we see the present situation in 1978 with operations under the 1976 Copyright Act.

The first part of that, and there are several tables, analyzes the King Report and tries to estimate from the figures in the King Report what volume of the photocopying reflected in the King Report would require authorization and which would fall into the various exemptions of the Act. King himself did not do that because, for one thing, he hesitated to interpret the Act and secondly, he got started in making up his questionnaire before the final Act was passed. So he couldn't anticipate all the questions he probably would have had if the thing had come later.

He also points out that the charge in his contract, left out a good many areas of photocopying. I suppose the principal one being photocopying for teaching purposes but that is an exclusion which CONTU has also. The other is unsupervised machines, but there are others. The net minimum figure which I end up with is something on the order of seven to eight million photocopied items each year in the types of organizations that King surveyed which would require authorization.

The next section under Part 3 beginning on Page 26 reviews what we know about the kinds of organizations,

institutions with other provisions which will be in place in 1978 for supplying authorization to photocopy where that is needed or, on the other hand, where the piece is in hand where you have something you want to photocopy and the other where you don't have a piece in hand and you want to get an authorized copy and where you can get it. That the latter deals with organizations such as ISI, University Microfilms and NTIS. There is also some reference to secondary suppliers Other secondary suppliers such as information on demand companies which have an incidental part of their operation, will supply authorized photocopies.

There is an effort to make -- to assess to what extent these organizations and operations will supply the need, where authorization to copy is required or authorized copies need to be secured.

The fourth section deals in a summary way with legislation and systems relating to photocopying in other countries, principally Great Britain, Canada, Australia, the Netherlands, France, and Germany.

The fifth brief section deals with the recommendations to the Commission by interested organizations and those are principally the six library associations, the Publishers Association, and the Authors League plus the organizations which did the reports for us, Public Interest Economic Center, and the Public Interest Satellite Association.

The sixth section deals with the possible effects of future technological changes so that we can anticipate it, drawing on our Cambridge meeting, and whether what we see now in itself would require any recommendations for the changes in the 1976 law.

That's where it stops, at the point at which the subcommittee will then proceed to fill in its specific recommendations.

CHAIRMAN FULD: I take it this is really information for the Commissioners not intended for publication to the Congress?

MR. FRASE: No. I would think it would go into the Commission report by an appendix, but I think it's essential background information for the Congress.

CHAIRMAN FULD: Now, if you want to take that point.

COMMISSIONER NIMMER: Yes, the paper that Bob has prepared is thought of, I think, by the Photocopy Subcommittee as material that will be a part of our final report although, as Bob suggested, some of it may very well -- the bulk of it may be in the appendix but not all of it by any means.

We do view it as information not just to Commissioners but to the public at large who may be reading the report, but of course, so what we have presented to you is only by way of introduction to what the subcommittee will ultimately recommend. What I have to report to you is still within the discussion phase within the committee.

I can give you kind of a background and skeleton of where we are heading. I hope the other members of the Subcommittee will join in to the extent that they think that I have not completely covered that matter or perhaps inaccurately done so.

When we get to the phase of recommendations there are various alternatives available to us and/or any combinations thereof. We can make specific recommendations to the Congress for new legislation. We can make recommendations to the Register of Copyrights as to factors she should take into account in making the five-year reappraisal of the photocopying problem as is called for by statute, and/or we can make recommendations to the public at large or more specifically to the publisher and author community and the library communities as to what their approach should be given the existing statutory structure.

Now, that's a rather broad outline. We hope to be more specific at the February meeting. We hope by then to have a draft report. The thought is that there won't be time for that draft report to come back to our Subcommittee members for further work before it goes to the Commission at large so that we all will be considering that at the next meeting, but there will be some input, of course, by the Subcommittee members to the staff before that draft report is written.

There was one specific proposal agreed upon

already by our group. Maybe more than one, but only one occurs to me. Perhaps I should throw that one out as of now, and that is, although even that had to be worked out in detail, that has to do with recommending legislation whereby photocopy shops or the so-called copying mills or the for profit copy enterprises would be required to post a notice in a prominent place in their enterprise so that the public can view it. This would set forth in as specific terms as possible the area that is permissible and the area that is impermissible in terms of photocopying -- here we may have some trouble in being specific, but I hope we can be -- and calling to the attention of the public the fact that it is copyright infringement to go beyond what is permitted under the copyright law. The thought being that this would be some inhibition on the photocopying mills in engaging in copyright infringement and, beyond that, it will be a deterrent to the customers of the photocopying mills and, hence indirectly, a deterrent to the mills themselves.

I think it might be appropriate in this morning's session to get any input that the rest of the Commissioners want to make as to specifics of where we can go within the confines of either recommendations to Congress, recommendations to the Register, or to call to the attention of the public the factors that we think should appropriately be called to their attention. It seems to me further that it

might be useful as preliminary to that to have David Peyton summarize for us the contents of his two papers he has done on options available to the Commission or options available for our recommendation.

David did a paper called the "Context for Considering Flexible Approaches to Subscription Pricing," and then supplemented that with another paper "Followup to Meeting of November 18, 1977," in which he broadly paints the various alternative approaches possible and, as I say, I think it might be useful to present that to the Commission. That, in broad strokes, is what he has in those papers.

David, can you do that.

MR. PEYTON: Okay, I have to confess I wasn't expecting to summarize the earlier paper, as well as the more recent one.

COMMISSIONER NIMMER: Do what you reasonably feel you can. I didn't give you advance notice.

CHAIRMAN FULD: Why don't you sit down.

MR. PEYTON: With respect first to the earlier paper on "Flexible Subscription Pricing," most of the attention on photocopying royalties seems to have been given to some kind of transaction-based mechanism, in other words, to a copyright clearinghouse or some other type of clearance mechanism. This is not the only way in which one can think of supplying additional revenues for scientific and technical journals, if that's a key problem to be met, and the viability of research publication is in some question.

As it stands now, research journals rely very heavily on their subscriptions for their revenues -- 80% or upwards. There has been some research done by our contractors at New York University on how journals might be able to alter their pricing so as to improve their revenues to make more profits if they're profit-making journal, or to narrow the gap if they're losing money. That would be through employing higher price discrimination as between institutional and individual subscribers, in other words, charging libraries more than individuals. This is already done to a large extent by a number of journals. The price charged to libraries may be, say, typically 60% higher than to an individual, although there is some difference between the journals in physical sciences and journals in social sciences here.

The point of the work which had been done by our contractors at New York University is that journals aren't using high enough price discrimination ratios to maximize their profits, and that ratios perhaps even higher than two to one would be in order. Then in that paper I explored some of the problems or barriers to such an approach. One of them regards the possibility that such practices would be illegal under the antitrust laws in one way or the other. I couldn't find a case exactly on point, and it seems doubtful that there would be a serious antitrust problem here, although one cannot entirely dismiss the possibility.

I also investigated the possibility that such high price discrimination ratios could result in the loss of the second class mailing privilege. Finally, the Post Office has responded and indicated that they do not see any problem here with the possible exception that in the case where most of the subscribers were libraries and paying the higher price rather than the lower price given to the individual subscribers who, in this particular specified situation are a minority, the lower price would be considered as a special discount and they might have some objection. That seemed to be somewhat qualified.

In short, there doesn't appear to be a big problem with the postal service in using higher priced discrimination ratios. At the end of the paper I drew up a chart comparing various aspects of the possibility of using subscription pricing as a way to improve the revenues of scientific and technical journals with other methods that have been given more consideration such as the Copyright Clearance Center type of mechanism. On the whole, it didn't seem to be markedly less worthwhile than the others and seemed to merit more attention than it had received.

In the second paper, the title of which is, "Followup to the Meeting of November 18, 1977," I was able to add more empirical evidence, specifically the formal response of the Postal Service and some notations from the 1978 price list of the American Chemical Society. One might be

interested to know that, with 17 of their 20 primary journals, they charged institutions four times as much as individuals. Apparently they find this an indispensable mechanism for financing all their publications.

Also, in the system in use in Western Germany, where a collecting society has contracts with around 500 industrial libraries, the principal way in which that collecting society gains revenues is by means of subscription surcharges where the licensed industrial library at its option either pays a 30% surcharge on the subscription price of particular journals it wants to copy or else 20% on every journal to which that library subscribes for more or less blanket permission to make copies.

That system is not very big and does not produce much revenues, but that appears to be because there is not a vigorous effort to promote the system or to get a larger number of licenses. In the second paper I sketched out four general levels of action which the Commission might want to consider taking on photocopying according to the perceived seriousness or gravity of the problem.

The first would be just to make recommendations that the Register review the problem in her five-year report and in effect take no particular action now.

The second level is what I characterized as

"diplomatic," in that the Commission would use its good offices to bring interested parties together for discussions on guidelines or agreements.

The third level is what I have characterized as publication or dissemination of research results to help facilitate the market for scientific and technical information. I suppose I have to agree that this would involve the Commission's giving what Mr. Lacy described the other day as some gratuitous advice to libraries and publishers, but I'm not sure whether that is not in order if our research results indicate that more rationalized decision-making by publishers with regard to pricing, or by libraries with regard to purchasing practices, would facilitate the working of the market for scientific and technological information.

The work done under contract to the Commission by Mr. Palmour on the appropriate cutoff point for subscribing to journals versus borrowing through interlibrary loan has this character, and the idea is to provide libraries with an economically sound decision-making tool. The work done by the New York University economists on subscription pricing and price discrimination ratios can be regarded as the same thing.

Finally, the most serious level of action would involve recommendations for changes in the law. The now-withdrawn proposals for compulsory licensing and taxation had

this character, as would a Whitford sort of recommendation with an umbrella statute or whatever, and some kind of either persuasive or simply coercive measure to induce librarians to join into some kind of blanket licensing agreement.

I've listed the categories of action in ascending level of seriousness in accord with the general principle of public policy that government should not intervene in markets if markets can be made to work somehow without government intervention or lawmaking. Now, a final comment about all the levels of action. They all have the interesting property that they are apparently not exclusive. In other words, you can try several at once with different combinations. This is the kind of flexibility that one rarely finds in policy-making. Usually one level of action will more or less preclude another, but that doesn't appear to be the case here.

I had some comments to make about the implications of these levels of action for what is quite apparently a time of transition in the market for scientific and technological information. As Professor Baumol has twice testified to the Commission, the costs make it more or less inevitable that we will move at some point from a paper base system to an electronics-based system. It's just a question of when and how. That's not to belittle the questions, because the questions of when and how have considerable

importance, I think.

One way of looking at answering the question of when and how the transition should occur would be to just let the market take care of it, if the market can be made to work in an appropriate way. It's possible that with rationalized decision-making purchasing practices by libraries and subscription pricing policies by publishers that the paper-based scientific and technological information system might be made more viable for longer, and thus give more time for development of electronic equipment to replace it; For example, better optics on screens so that users could have products which are better or at least less disagreeable to them initially to use.

I have to admit I have had a couple of second thoughts after talking to Commissioner Wilcox yesterday, but, that regards only to the point about prolongation. The more general point about letting the market interpret when is an appropriate time for transition remains. Finally, I had some comments to make about the now withdrawn proposals for taxation of photocopying machines and compulsory licensing and since these proposals have been withdrawn, I will reword what I had to say. There are a couple of points I think are still worth making especially with regard to some of the practicalities of photocopying.

There has been a considerable amount of concern, I think, about unsupervised machines and according to the

best information we have been able to get from market consulting firms, the volume of copying done on unsupervised machines has not been very high, perhaps about 200 million pages each year. This is not too surprising, I think, when one considers, first of all that copying on such machines is rather more expensive than in a copying mill or commercial copying establishment. For example, in the Daily Bruin yesterday, there was an ad which some of you saw, I think, to the effect that one could have copies made there for 2½ cents a page.

I gathered that in unsupervised machines it is typically 10 cents a page and, on top of that, the copies are almost uniformly worse for reasons of maintenance. The unsupervised machines are the older Thermofax type which uses the zinc oxide coated paper with the funny smell and it comes out gray, and the copies can roll up and they are much less usable and attractive than the plain paper copies which one can get at the commercial copying establishment.

On the subject of plain paper copying some of the same market consulting firms have made predictions that the large, new machine by Xerox, the Xerox 9200, is quickly going to dominate the plain paper copying market and they expect that within several years this one machine will account for half of all plain paper copies made in the United States.

This machine makes two impressions a second. It is typically used by corporations to produce instruments of trade, whether tariffs or schedules or bills or whatever, or by state governments to produce their standard bureaucratic forms. This machine is going to come to replace offset printing in some circumstances which means there is a huge volume of photocopying going on here. This machine may account for 50 billion pages a year before too long. It's hard to see that much of anything coming out of this machine is going to have copyright ramifications.

I had a couple of final comments about the copying mill industry, if one can call it an industry. It is clearly a cottage industry with lots of small proprietors, and this results from there being no particular economies of scale because the largest machines, like the Xerox 9200, are clearly impractical and unusable by copying mills who have to do large numbers of small jobs, and furthermore, there is no barrier to entry. There is no reason why anyone can't set up shop and go into business, so, it looks like there are lots of small proprietors.

The only particular problem I can see in legal enforcement is the gathering of evidence. It doesn't look like any of these copying mills would be a particularly formidable defendant as long as one could find some evidence or witnesses that infringement had actually occurred.

CHAIRMAN FULD: Thanks for a very good resume.

MR. PEYTON: Thank you, sir.

CHAIRMAN FULD: Mel, may I ask -- what troubled me was that of your not addressing yourself at all to policing and enforcing.

COMMISSIONER NIMMER: Well, that certainly is one of the issues involved, Judge.

CHAIRMAN FULD: Is it our function to go into that -- profits?

COMMISSIONER NIMMER: Well, if we feel that there is a problem, as obviously there is, the policing and enforcement, then the real question is does that require some kind of new legislation to alleviate the problem in some way.

I don't think -- we've thought in terms of just what do we do about having more arms of the government or of the copyright owners to verify that infringement is occurring or isn't occurring. That's not necessarily beyond our province, but I don't think we have thought of it in those terms.

CHAIRMAN FULD: But legislation won't be required for flexible pricing.

COMMISSIONER NIMMER: No.

CHAIRMAN FULD: I mean the number of subjects are not involved, just the legislation.

COMMISSIONER NIMMER: That's right, some do involve and many do not.

It still remains open. David Peyton spoke of the

withdrawn proposals. These proposals, one by John Hersey, the other by myself, did involve some sort of [illegible] a law with teeth in it that would require some kind of additional payments or payments that are not presently required by law. Speaking for myself, I think some approach along those lines may still be useful but not necessarily a recommendation of an immediate invoking of that. I'll be more specific at the February meeting.

I think this might be an appropriate time, though to hear from members of the Commission who are not members of the Subcommittee without precluding, obviously, members of the Subcommittee from speaking if they want to as to any thoughts they may have on what the appropriate approach should be.

CHAIRMAN FULD: It certainly would be helpful to me.

COMMISSIONER LACY: Mr. Chairman, I am sitting here in uncharacteristic silence in order to afford an opportunity for any Commissioners who are not members of the committee to speak. There is a word I'd like to add.

It seems to me that in all the deliberations in the Congress and before CONTU in our discussions in the general debate on this issue, there has been rather careful and consistent attention to the impact of various possible programs of law and guidelines for application on publishers of journals, particularly, and other publishers as well but primarily publishers of scientific and technical journals

and on authors and on the other hand, the impact on libraries and users. We've paid relatively little attention however, to the impact of various possible forms or applications of the law on businesses that exist in order to provide licensed photocopies for a fee, firms like University Microfilms, also, like ISI, like any number of smaller ones. I have a feeling, that we have not given adequate attention to their role in the whole question of dissemination of information, the value of that role, and the effect on their capacity to function in various levels of forms of copyright law. To what extent would it be socially desirable, for example, for there to be stronger and larger services of this sort, what is the impact on their capacity to survive and to function? These are the same kinds of questions we have asked about. Publishers, I think, might well be asked about that.

I have one other observation. Since our meeting, Wednesday, of the subcommittee, I have been thinking a little bit further about our report, and as you have indicated we have been thinking of it in primarily two terms, one of what legislation we might recommend primarily in dealing with areas not covered by Section 108 such as photocopying and commercial copying establishments; and in terms of whatever advice or guidance we could give the Register of Copyrights which she might want to take into account in the five-year review.

It occurs to me that we also ought to think perhaps of our report as an important document in itself and that others could take advantage of the very extended consideration hearings we have had on this and the thought that the Commissioners have given on this, so that it should be a thought-shaper among all groups, since we have wrestled with this problem for a long time.

It might be useful to have the report not confine itself so narrowly, as it has now been conceived, to the specific function of this Commission as to the establishing of law. We should back off and ask some questions. What is the social role that copying plays? Why has it arisen? What does it do? What changes are going to occur over the foreseeable future?

It could be a kind of scholarly contribution to this field which I think we have an opportunity to offer because it would be a publication of this Commission. I think it would be widely read. It would be broadly helpful in shaping attitudes and ways of thinking about this problem for all the parties at issue. I think we tended, "we" meaning not the Commission but all of us who have been concerned with this problem in the 10 or 15 years it has been debated, now to think of a given system and the relative rights and obligations of participants within the system as given, and we haven't really backed off and thought about what we could do to create a better system of dealing with

the dissemination of information in the fields involved and what role copyright would play in stimulating and inhibiting that.

I would hope the staff would feel encouraged to write a broadly, thoughtful, and informative study of the whole problem as part of this report. This should be quite apart from any recommendations it might come up with. It might be a very useful contribution to the debate to be a thoughtful discussion of the issues as a whole.

CHAIRMAN FULD: Yes, George.

COMMISSIONER CARY: I would like to ask Professor Nimmer a question.

As one who is not on the committee and who knows only what he is hearing this morning about it, I have had a general feeling which I hope is wrong and that is why I would like to ask you to clarify it. Namely, when you talk about, as your alternatives at least two of them, as making recommendations for legislation and/or making suggestions to the Register for inclusion in the five-year review thing, somehow I get the feeling it may be the committee itself hasn't yet decided what the real problem is and this is an attempt to maybe let it sit for five years.

I wonder is this right or am I wrong? If so, what would be the pros and cons of both of those alternatives?

COMMISSIONER NIMMER: Well, there is not, up to this

point, unanimity on what we should recommend. This still has to be further discussed.

COMMISSIONER CARY: I realize you haven't come to any conclusion. I just --

COMMISSIONER NIMMER: But there isn't anything on what the problem is. I don't know how quite to respond to that. I think we all agree there is a problem or this would not have been a part of the charge of the Commission. How one deals with the problem is something that we do have to try to reach agreement on, or if not, be clear that we are not in agreement on it.

COMMISSIONER CARY: Well, perhaps I'm premature in asking the question. Maybe I should wait for February.

CHAIRMAN FULD: I think Dan Lacy's suggestion is a good one.

COMMISSIONER NIMMER: Yes. Although that requires some direction, it seems to me, beyond the general charge to write a scholarly piece on the problem of copying.

COMMISSIONER SARBIN: Just press the button to the computer.

COMMISSIONER WEDGEWORTH: I think there is a great deal of merit to what Commissioner Cary just said, that this is a question of not being able to pinpoint what the problem is. From my own perspective, I think the major problem is that there are so many different understandings of exactly what is going on out in the field and makes it extremely difficult

to reach precise recommendations when there are so many different understandings of what the problem may be; and therefore, one of the important contributions that this subcommittee and the Commission itself can make is to put on record some very sound research based information as to what is going on. It goes back to some of the earlier discussions on photocopying. What occurred between representatives of authors, publishers, and librarians when, as I recall, they could sit around the table and argue about photocopying and without having a shred of evidence as to exactly what was going on in the field.

I think the introduction of the King Report is the first comprehensive set of information as to what is actually going in in the field. I think that has contributed to a better understanding. The impact of that is that when we were discussing the elements that were actually under study in the King Research Report there was a much different understanding as to the amount of photocopying that was going on relative to interlibrary loans.

When you look at that data it becomes very clear that that is only a very tiny portion of all the copying that is going on in the institutions that were under study. So I think that data, the information that we have been trying to get Mr. Peyton to help us develop, will really give us an overview of the economics and how these various factors work in the industry as it relates to the

library, educational, and other user communities, would be extremely helpful.

I think the major problem is to generate a broad level of understanding of where we are, and a recognition of this transition period that Dr. Baumol and others were trying to explain to us. I think that constitutes a very important part of our job, in my opinion.

CHAIRMAN FULD: Anyone else wish to address himself to the problem?

Well, the impact of what is going on is contained in Bob Frase's summary, and that would play a large portion of our report.

COMMISSIONER NIMMER: That certainly would lay the groundwork then for whatever we recommend or choose not to recommend.

COMMISSIONER WEDGEWORTH: Well, I think it will be clear in the report what we are planning to have in the February meeting. At least that will have all the elements of what we conceive of as the report.

CHAIRMAN FULD: Nothing more to talk to on the subject?

Do you have anything?

MR. LEVINE: Yes. On the February meeting it really makes little difference geographically where we meet. I suppose for a majority of the Commissioners New York is more convenient than Washington.

CHAIRMAN FULD: What day do you want?

MR. LEVINE: Palm Beach is still more convenient than most.

CHAIRMAN FULD: What date?

MR. LEVINE: February 16 and 17. Unless there is much dissent, I would suggest that we hold the February meeting in New York at a place that we will make known to you in the next week to 10 days.

COMMISSIONER NIMMER: February 16 and 17?

MR. LEVINE: 16 and 17, yes.

We will forward to the Commissioners not on the Photocopying Subcommittee David's followup to the November meeting. We are also hoping to have a report by the New Works Subcommittee distributed to the Commission before the February meeting.

I would hope also at the February meeting perhaps to get some definitive understanding from the Commission as to the Commission's position on the Software Subcommittee's Report.

That's all that I have to say.

CHAIRMAN FULD: Anyone else have anything to impart or contribute? If not, I imagine a motion to adjourn is in order.

COMMISSIONER WEDGEWORTH: So moved.

CHAIRMAN FULD: Nobody seeming to object, the meeting is adjourned.

(Meeting terminated at 11:15 a.m.)

STATE OF CALIFORNIA)
) SS.
COUNTY OF LOS ANGELES)

I, Ernest M. Sanchez, a Notary Public in and for the State of California, do hereby certify:

That the foregoing transcript was recorded stenographically by me at the time and place herein named, and was thereafter reduced to typewriting under my direction and supervision;

That the foregoing comprises a true and correct copy of the proceedings had and reported by me.

I hereby certify that I am not interested in the event of the action.

IN WITNESS WHEREOF, I have subscribed my name and affixed my seal this 3rd day of February, 19 78.

Ernest M. Sanchez
NOTARY PUBLIC IN AND FOR THE
STATE OF CALIFORNIA

OFFICIAL SEAL
ERNEST M SANCHEZ, JR.
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My Commission Expires Nov. 17, 1980

Presented for inclusion in the record by CAROL RISHER FROM THE ASSOCIATION OF AMERICAN PUBLISHERS

APPENDIX A

PHOTOCOPYING BY CORPORATE LIBRARIES

A STATEMENT OF POSITION WITH RESPECT TO THE PHOTOCOPYING OF JOURNAL ARTICLES AND OTHER SHORT WORKS BY CORPORATE LIBRARIES UNDER THE NEW COPYRIGHT LAW, AND ANSWERS TO SOME QUESTIONS FREQUENTLY ASKED

PREPARED BY THE
ASSOCIATION OF AMERICAN PUBLISHERS, INC.
AND BY THE AUTHORS LEAGUE OF AMERICA, INC.

JANUARY, 1978

shall include the purpose and character of the use including whether it is of a "commercial nature"; the nature of the copyrighted work, the amount and substantiality of "the portion" of the copyrighted work that is used "in relation to the copyrighted work as a whole"; and the effect of the use upon the potential market for or the value of the copyrighted work.

Examples of fair use, as stated in the Register's Report and repeated in the Senate and House Reports convey the limited nature of the doctrine. They are

> the "quotation of excerpts in a review or criticism for purposes of illustration or comment; quotation of short passages in a scholarly or technical work, for illustration or clarification of the author's observations; use in a parody of some of the content of the work parodied; summary of an address or article, with brief quotations, in a news report; reproduction by a library of a portion of a work to replace part of a damaged copy; reproduction by a teacher or student of a small part of a work to illustrate a lesson; reproduction of a work in legislative or judicial proceedings or reports; incidental and fortuitous reproduction, in a newsreel or broadcast, of a work located in the scene of an event being reported."

Copying by a corporate library is usually for a "commercial" purpose (it surely is not for a "non-profit" purpose). Most of a corporate library's copying is of a "work as a whole" (an entire article is an entire work). And most of a corporate library's copying of copyrighted articles and other works will affect the potential market for the copyrighted work. (This will be particularly true if hard copies can be purchased from the publisher or from

licensed reproducing agencies or if authorized on-the-premises copying is permissible through the Copyright Clearance Center or other similar mechanisms.) It is reasonable to conclude therefore that "fair use" will justify the copying of copyrighted articles and other works by a corporate library only where the copying is infrequent and sporadic, and where the quantity copied is small.

SECTION 108

Section 108, on the other hand, authorizes certain kinds of library photocopying that could not qualify as "fair use", provided, among other things, that such copying is done "without any purpose of direct or indirect commercial advantage." Whether a corporate library can be considered to be acting without such a purpose and can therefore take advantage of section 108 copying exemptions is debatable.

The Senate Report says that Section 108 is intended to "preclude" a library in a profit-making organization from making photocopies unless the copying "qualifies as a fair use" under section 107 or the organization obtains the necessary copyright licenses. On the other hand, the House and the Conference Reports say that "isolated, spontaneous making of single photocopies" by a corporate library "without any systematic effort to substitute photocopying for subscriptions or purchases" and "without any commercial motivation" would come within the scope of Section 108. Since the Reports are

INTRODUCTION

From time to time, copyright-related questions, having to do with photocopying* by corporate libraries** of journal articles and other short works have been asked of us. These same questions have been the subject of debate between and among publishers, authors and librarians.

The Senate and House reports recognize that neither a statute nor legislative history can specify precisely which library photocopying practices constitute the making of "single copies", as distinguished from "systematic reproduction". Each body therefore recommended that representatives of authors and publishers meet with the library community to formulate comprehensive guidelines. The library associations unfortunately have not been forthcoming in this regard, and therefore the Authors League and the Association of American Publishers have developed this document to assist corporate libraries to comply with the new law. The document consists of a summary discussion of the relevant sections of the new law, supplementary guidelines developed by the AAP and the Authors League, and some of the most frequently asked questions about photocopying and our answers.

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* and other kinds of reprographic reproduction, as now commonly practised.

** We refer to libraries and information centers operated by or associated with for-profit organizations.

We expect in the near future to develop a similar document for academic and public libraries.

As you read what follows, please bear in mind that when we respond to questions about what copying cannot be done under the new law, we are only talking about what cannot be done without permission or payment. Through such organizations as the newly formed Copyright Clearance Center, copying that goes beyond the limits permitted by the new law can be done quickly and economically.

The two sections of the new copyright law, Public Law 94-553 (Title 17, U.S. Code) relevant to photocopying are Section 107 ("fair use") and Section 108 ("reproduction by libraries and archives").

Section 107 makes no change in the judicial "fair use" doctrine; it merely codifies it. Section 108 on the other hand, in certain circumstances and under certain conditions, permits libraries to make copies which they could not have made under the "fair use" doctrine and which would not be permissible under Section 107.

SECTION 107

The right of a corporate library to make "fair use" copies of copyrighted articles and other works under Section 107 is closely circumscribed. Section 107 provides that in determining whether in a particular case "fair use" is being made of a copyrighted work, the factors to be considered

not consistent in this regard, they are of little assistance in determining the meaning of the "commercial advantage" limitation.

Assuming that a corporate library can come within the scope of section 108, its collections must be open to the public or available not only to those connected with the organization but also to others including competitors doing research in its specialized field, and the photocopies which it makes must include the appropriate notice of copyright.

Section 108 copying privileges, whether for non-profit or for corporate libraries, are limited to supplying a user under certain conditions with "no more than one copy" of "one article" in a journal issue. While further single copies of that article may be supplied to other users, this may be done only on "isolated and unrelated" occasions.

Section 108 specifically prohibits any library from engaging in the "related or concerted" making of multiple copies of the same material, whether on one occasion or over a period of time. It likewise prohibits the "systematic" making of copies, whether single or multiple.*

The House Report makes clear that a library in a profit-making organization would not be authorized, under Section 108, to:

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* The Senate Report, at pages 70-71, gives specific examples of prohibited reproduction of multiple copies and of systematic copying.

" (a) use a single subscription or copy to supply its employees with multiple copies of material relevant to their work; or

(b) use a single subscription or copy to supply its employees, on request, with single copies of material relevant to their work, where the arrangement is "systematic" in the sense of deliberately substituting photocopying for subscription or purchase; or

(c) use "interlibrary loan" arrangements for obtaining photocopies in such aggregate quantities as to substitute for subscriptions or purchase of material needed by employees in their work."

Moreover, it says, a library in a profit-making organization "could not evade these obligations by installing reproducing equipment on its premises for unsupervised use by the organization's staff."

For all of the reasons developed in the foregoing paragraphs, it seems reasonable to state that exempt copying by for-profit organizations will be narrowly confined.

NUMERICAL GUIDANCES

There are inherent limits to the amount of copying that may be done either through interlibrary arrangements or by a library itself for its own users, and Congress has urged the interested parties to establish specific numerical

limits through the development of mutually acceptable guidelines.

Some guidelines for certain kinds of interlibrary copying have been agreed to under the aegis of the National Commission on New Technological Uses of Copyrighted Works (CONTU). These establish the so-called "rule of five" for interlibrary arrangements for articles not more than five years old, (namely, that not more than five requests in the aggregate may be made in any calendar year for copies of an article or articles published in any particular journal within five years from the date of the request).* Thus, in any calendar year, requests by one library from others may be filled for one copy of each of five different articles published in PHYSICS TODAY during the past five years, or five copies of one of such articles, or three of one and two of another, so long as the total number of copies of articles from this periodical requested during the calendar year does not exceed five.

But CONTU guidelines do not specify limits on the copying of journal articles more than five years old, leaving that for "future interpretation." Neither are there any agreed guidelines for copying that a library may do for its

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* The rule is stricter for contributions to other kinds of collective works, such as an anthology. No more than five copies in the aggregate may be made in any calendar year from any such work regardless of its age, so long as it is in copyright.

own users, or for copying on unsupervised copying equipment located on corporate library premises, or for copying by multiple libraries that serve and are operated by the same company.

To fill these gaps and to provide some guidance we would be willing, provisionally, and subject to review from time to time, and without prejudice to our position in future negotiations or litigation, to accept the following as compliance with the new law:

1. Copies requested by one library from other libraries --

a) For journal articles less than five years old, we accept the CONTU "rule of five", subject to the conditions stated in the guidelines.

b) Subject to the conditions stated in those guidelines, not more than five copies per year, in the aggregate for all of its users, of an article or articles published in the journal more than five years prior to the date of the request. Thus, a library may obtain from other libraries in any calendar year, five copies in the aggregate of one or more articles published in that journal during the previous five years, and in addition, five copies in the aggregate of one or more articles published in that journal prior to that five year period.

2. Copies made by a library for its own users from a journal in its own possession. A library in any calendar year may make, in the aggregate for all of its users, not more than two copies of one article or one copy each of two articles appearing in any given periodical issue.

3. Unsupervised use of copying equipment located on the library premises. The new law provides no exemption to a corporate library with respect to the unsupervised use of copying equipment on its premises. The corporate library's obligation is therefore to ensure that no prohibited copying is done on its premises, or to make appropriate license arrangements with the relevant copyright owners.

4. Multiple libraries operated by the same company. If multiple libraries are operated by and serve a single company, their copying must be aggregated to determine whether such copying exceeds permissible limits. This is true both for interlibrary arrangements and for copying done for the company's own employees.

QUESTIONS AND ANSWERS RELATING TO PHOTOCOPYING BY CORPORATE LIBRARIES

1. Q. If an organization has a license or other form of permission to make photocopies for its employees from journals or access services, does it need to pay for this copying in any other manner?

   A. No. The conditions of the license or other permission govern such uses. (If they are not broad enough, additional rights should be sought through negotiations).

2. Q. Is there any difference if the requests that lead to this copying come from the use of other services, such as computer searching?

   A. No.

3. Q. Can multiple copies of a copyrighted article be made without express permission?

   A. No, except when the copying is reported and paid for through the Copyright Clearance Center or other clearance or royalty mechanisms.

4. Q. Will the collections of a corporate library be considered to be "open to the public, or available...to other persons doing research

in a specialized field" (as required by Section 108) if would-be outside users must make appointments for such use; or if, having been permitted to conduct their research, they are excluded from nearby proprietary material?

A. Probably "yes", in each case.

5. Q. Would such collections qualify under Section 108 if employees of competitors are denied access?

A. No.

6. Q. Would such collections qualify under Section 108 if the would-be users are not granted physical access, but if photocopies of articles in the collection are provided on request through interlibrary transactions?

A. Probably not.

7. Q. May a library that is eligible for Section 108 privileges supply single copies of an article from a periodical to an unlimited number of individuals?

A. No. Section 108(d) permits the library to supply to a requesting user no more than one article from a given periodical issue. Section 108(g) limits

this permission to "the isolated and unrelated" reproduction of a single copy of the same material on separate occasions. The section prohibits the "related or concerted" copying of the same material on one occasion or over a period of time; it also prohibits "systematic" copying, whether of multiple or single copies.

8. Q. May such a library supply a requesting user with a copy of each paper printed in a symposium issue?

   A. No.

9. Q. Is it possible to quantify the number of times a corporate library may copy an article from a specific periodical under the "fair use" doctrine of Section 107?

   A. Yes, it would be possible, if quantitative limits were established by guidelines negotiated among the interested parties. Publisher and author associations desire to negotiate them, but the Council of National Library Associations is "not sympathetic" to participation in any such discussions now.

10. Q. Is it possible to quantify the number of times a corporate library may copy an article from a specific periodical under Section 108?

A. Yes, it would be. See the answer to the previous question, and see pages 8-9 under NUMERICAL GUIDANCES.

11. Q. Is an organization that buys more than one subscription to a periodical entitled to use the number of its subscriptions as a multiplier of the number of copies it may make under the guidelines or guidances?

A. Yes. If for example, a library has two subscriptions to a journal, it may make, in any calendar year, in the aggregate, not more than four copies of one article or two copies each of two articles appearing in an issue of that journal (cf. pages 8-9).

12. Q. Is it true that most library photocopying can be justified--is best justified--under the "fair use" doctrine of Section 107, and that Section 108 chiefly provides clarifications that were developed to allay unjustified library fears?

A. No. General reliance on the concept that Section 107 permits large-scale copying would place libraries in violation of the law. Section 108 gives library copying privileges not available under Section 107, and there is no refuge in Section 107 from the clear limits on these privileges set forth in Section 108.

13. Q. Is a library permitted to make additional photocopies of a journal article for a user under Section 107 ("fair use") after it has exhausted its right to do so under Section 108(d)?

A. Clearly not. The legislative reports stress that Section 108 authorizes certain additional photocopying practices which do not qualify as "fair use" under Section 107. Thus Section 108 amplifies and supplements Section 107. To attempt to argue the reverse is to stand the law on its head.

14. Q. Can it be considered a request by a user for "no more than one copy" (as the term is used in Section 108) if a library, in response to the user's subject request, supplies the user with a copy of each article on or related to that subject, that thereafter comes to its attention?

A. No, the supply of copies in such a manner would be neither "isolated" nor "unrelated"; hence, it would not be permissible under Section 108. On the contrary, it would be specifically prohibited as "systematic".

15. Q. If a library supplies a single photocopy of an article to an individual, at his request, in isolated and

unrelated instances pursuant to the individual's own identification of articles through his own computer search, are such requests any different legally from other requests for photocopies he may make?

A. No; how the individual identifies references for himself would not seem to be germane.

16. Q. What if the computer search was conducted for the individual by the library, and was based on his request that the library send him a photocopy of each article identified by the search?

A. Clearly, this service would constitute "systematic" copying, prohibited by Section 108(g).

17. Q. Is it permissible to make a photocopy from a copy of an article if the first copy was legally prepared or obtained?

A. Permission or payment would usually be required for such additional copying.

18. Q. What if the copyright notice does not appear on the first generation copy?

A. A serious effort should then be made to identify the source of the article and seek the requisite permission.

19. Q. Is a company exempt from copyright restrictions if it provides multiple copies of articles (including those by company authors) to comply with federal or other governmental requests?

A. Usually not. It is assumed that the company will be able to obtain permission from the publisher, or to report and to pay for any necessary multiple copying through the Copyright Clearance Center or other clearance or royalty mechanisms.

20. Q. If an article has been written by a company employee with company approval, may the company or its employee-author photocopy the article for internal use, without specific publisher permission? What is the situation when reprints are not at hand? May such articles be reproduced for product-promotion distribution?

A. The answers to all three questions depend on the nature of the agreement between the publisher and the company or its employee-author.

21. Q. Are non-U.S. publishers covered under the new law?

A. Yes, in almost all instances.

22. Q. May a library lawfully obtain photocopies from service organizations such as the British Library Lending Division?

A. Only if the supplying service is licensed to provide the copies, or if it or the requesting library will report and pay for the photocopies through the Copyright Clearance Center or other recognized clearance or royalty mechanisms.

23. Q. What restrictions, if any, are there on the copying of bibliographical references appearing as foot notes to or at the end of an article?

A. Each reference, as such, is in the public domain and is not subject to copyright. However, copyright may exist in the compilation of the references. Hence copying of compilations of such references will usually require permission.

24. Q. May a company (or its library) copy the tables of contents from periodical issues and distribute them to company employees without permission from the publisher?

A. No, this would require permission of the publisher.

25. Q. May a company copy the "author abstracts" that are part of periodical articles? May it collect these abstracts into bulletins that it sends to its employees to alert them to new information?

A. No, to both questions. Because an abstract contains the core or essence of the article, copying it can be likened to the copying of the whole of the article. The copying of abstracts without permission is not "fair use".

26. Q. May a company make multiple copies of abstracts that it has received legitimately through licensed computer searching of access services?

A. Only if the license for such searching includes the right to make such multiple copies, or if reporting and payment can be made through the Copyright Clearance Center or other authorized mechanisms.

27. Q. What are the copyright-related consequences of copying of copyrighted material by employees at unattended copying machines?

A. Copying in excess of that permitted by Sections 107 and 108 will constitute infringement for which both the company and the individual will be responsible. We suggest that each company having unattended machines on its premises adopt the following procedures:

(i) Circulate a memorandum to the staff stating the limitations of the "fair use" doctrine.

(ii) Require that copying beyond "fair use" be done by the library staff, either as permitted by Section 108, or as authorized by the copyright proprietor, or through the Copyright Clearance Center or similar mechanisms.

28. Q. What notice of copyright must be included on photocopies made by libraries under Section 108?

A. The same notice of copyright that applies to the original work. Section 108(a)(3) requires that the copy include "a notice of copyright". A "notice of copyright", as provided in Section 401, should include the prescribed symbol, word or abbreviation for copyright, the year of first publication, and the name of the owner of the copyright. In order to avoid error, the library should include on the copy the notice of copyright appearing on the copied work.

We disagree with the expressed view of the Council of National Library Associations that the following notice is adequate: "This material may be protected by copyright law (Title 17 U.S. Code)." We believe such a notice is totally inadequate to comply with the requirements of Section 108(a)(3).

Some Additional Questions and Answers relating to the Copyright Clearance Center (CCC)

29. Q. What is the CCC and when did it commence operation?

A. The CCC is a non-profit corporation organized for the primary purpose of providing publisher permission to copy journal articles and other short works for internal use and to provide a method for centralizing the payment of the publisher-prescribed fees for such copying. It began operation on January 1, 1978. Copying by bibliographic-searching and other similar organization to fill clients' requests can also be authorized through CCC.

30. Q. How can one obtain more information about CCC?

A. By writing to CCC, 310 Madison Avenue, New York, New York 10017. A manual for libraries and other users is available without charge.

31. Q. Can copies in excess of those permitted by the CONTU guidelines be obtained through interlibrary arrangements by the use of CCC; and if so, how?

A. Yes. This can be done if either the requesting library or the supplying library reports the copying to CCC. The Users Manual indicates how the ILL form should be filled out to accomplish the purpose.

32. Q. Who is responsible for payment of the copying fee when a copy of an article is supplied by facsimile transmission?

A. As in the case of the supplying of a copy through interlibrary arrangements, the library that does the copying has the responsibility for seeing that the fee, if required, is paid. However, as between the requesting and the supplying library the cost will be borne as agreed between them.

APPENDIX B

LIBRARY PHOTOCOPYING and the U.S. COPYRIGHT LAW of 1976

An Overview
for
Librarians and Their Counsel

Prepared and Distributed
under the Auspices of the
SPECIAL LIBRARIES ASSOCIATION
Special Committee on
Copyright Law Practice and Implementation

December 29, 1977

ISBN 0-87111-253-1

Additional copies of this document are available at $3.50 per copy prepaid. Address orders to the SLA Order Department at the address above.

Table of Contents

Foreword

The body of this document is an "overview" of the provisions of the new copyright law which directly concern library photocopying. It was prepared by the general counsel of Special Libraries Association, Gifford, Woody, Carter & Hays, in New York. We hope that it will be of practical use to the members of the Association and their counsel.

SLA has always recognized the legitimate rights of copyright owners and the validity and importance of those rights. However, libraries and their users also have rights which are equally valid and equally important. Specifically, this includes the right to make photocopies pursuant to the doctrine of *fair use.*

There is evidence that some publishers (but by no means all publishers), are seizing upon the occasion of the implementation of the new copyright law to imply that some fundamental change has occurred in the rights of libraries and their users to make photocopies. It is simply not true that a fundamental change has occurred. As the body of this document makes clear, the rights we had before we still have.

We suggest that no librarian need apologize for firmly asserting the photocopying rights permitted by the law. As was stated in the well-known *Williams & Wilkins* case (which is discussed in this document), the policy behind the doctrine of *fair use* is "... the public interest in the development of art, science and industry." The importance to libraries, their users and the nation of vigorously maintaining the right to make photocopies pursuant to *fair use* is self-evident.

All agree that *fair use*, as an equitable rule of reason, cannot be the subject of an exact or detailed definition. Because of this we are increasingly skeptical of the efforts of publishers to hem in the doctrine with "guidelines." Guidelines invariably mean number limitations on copies which in turn mean record keeping by libraries which means uncertain legal obligations but very certain additional costs. Guidelines will, we suspect, have a tendency to becoming binding law.

Finally, we suggest that the current furor over library photocopying may turn out to be much ado about very little. The thrust of much of the commentary by publishers is that photocopying in excess of *fair use* is rampant in all libraries—especially in corporate libraries. Our own experience is that this is not true. We suspect that the increase in library photocopying is due to the enormous increase in the user population. The earliest independent report on this question, the King report,* bears this out. In five years the new law requires a review and report on the matter by the Register of Copyrights. Pending that review we suggest that all involved lower their voices and get on with the business of putting information to work.

Our counsel has requested that we make clear that the purpose of the enclosed document is to provide you with information; that particular facts and circumstances could alter some or all of the interpretations contained in this report; and, that any specific question arising under the law should be referred to the library's own counsel.

SLA Special Committee on Copyright
Law Practice and Implementation

Mark H. Baer
Efren W. Gonzalez
Frank E. McKenna
Ronald P. Naylor
Shirley Echelman, *Chairman*

*"Library Photocopying in the United States and Its Implications for the Development of a Copyright Payment Mechanism." A report on studies jointly funded by the National Commission on Libraries and Information Science, the National Science Foundation, and the National Commission on New Technological Uses of Copyrighted Works. (Sep 1977) King Research, Inc., 6000 Executive Boulevard, Rockville, Maryland 20852. This report will be available from GPO as GPO #052 003 004437 at $4.50.

Introduction

On January 1, 1978 the new copyright law[1] will become effective thereby replacing the copyright law of 1909. This narrative comments on the three provisions of the 1976 law which directly concern library photocopying, specifically Section 106 (the statutory grant of rights to the copyright owner), Section 107 (which preserves the right of *fair use*) and Section 108 (which grants libraries certain additional copying rights). In addition there are brief comments on Section 117 (relating to computers and copyrighted materials) and Sections 501 to 505 (which are among the sections dealing with copyright infringement and remedies). Included are selected references to portions of the three congressional reports which relate to Sections 107 and 108. The intent is to provide librarians and their counsel who are concerned with photocopying with an overview of the law and its more important legislative history.

For many years libraries and their users have been legally making photocopies under the 1909 copyright law. The legal basis for most photocopying in the past has been the judicial doctrine of *fair use* which is embodied in a large number of decided cases including the *Williams & Wilkins* case.[2]

As Section 107 of the 1976 law explicitly preserves the *fair use* doctrine, photocopying that was permissible under the old law continues to be permissible under the new law. This fundamental fact should be kept in mind while endeavoring to unravel the mysteries of Section 108.

It is the presence of Section 108 in the 1976 law which makes analysis complicated. As is indicated, Section 108 grants libraries certain copying rights in addition to those granted by Section 107. A basic difficulty in interpreting Section 108 is that while by its terms it grants rights in addition to the *fair use* rights in Section 107, a strong argument can be made that the copying permitted by Section 108 is within the doctrine of *fair use.* What then is the relationship between Section 107 and Section 108? In the absence of conclusive judicial interpretation no one can be certain. It can be anticipated that some copyright owners will urge the narrowest possible interpretation of the general words and phrases in Section 108 (*e.g.* "systematic"); and that, as so interpreted, Section 108 conclusively defines the scope of *fair use* as regards the situations therein described. It is hoped and expected that the courts will hold the plain language of Section 108 to mean what it says, namely, that the rights therein granted are an additional limitation on Section 106 and that Section 108 does not in any way affect the right of *fair use* granted by Section 107. A logical interpretation of Section 108 is that it merely identifies certain copying situations which are conclusively presumed to be legal without affecting the right of *fair use* which continues as a general and flexible concept of law.

The 1976 act is rich in legislative history. Detailed commentary on the legislative history of the 1976 law is beyond the scope of this narrative.[3] The most important legislative history relating to the sections with which we are here concerned appears plainly to be the relevant portions of the three congressional reports:

The House-Senate Conference Report, H.R. Rep. No. 1733, 94th Cong., 2d Sess. (1976) [hereinafter cited as Conference Report];

The House Report, H.R. Rep. No. 1476, 94th Cong., 2d Sess. (1976) [hereinafter cited as House Report]; and

The Senate Report, S. Rep. No. 473, 94th Cong., 1st Sess. (1975) [hereinafter cited as Senate Report].

Appended to this narrative are the parts of those three reports which relate to Sections 107, 108, and 117.

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[1]Codified at Title 17, U.S.C. (1977) [As the law was adopted on October 19, 1976, it is hereinafter cited as the 1976 law.]

[2]*Williams & Wilkins Company v. United States*, 487 F.2d 1345 (Ct.Cl. 1973), *aff'd per curiam*, 420 U.S. 376 (1975).

[3]The complete House, Senate and Conference Reports can be found at 1976 U.S. Code Cong. & Ad. News 6089. Also see the House debate which appears in the *Congressional Record* of September 22, 1976. For a comprehensive discussion of the legislative history of this statute, readers may refer to Julius J. Marke, "United States Copyright Revision and its Legislative History," 70 *Law Library Journal* 121 (May 1977).

To state the obvious, legislative history is not law. However, prior to conclusive judicial interpretation, legislative history can be a guide to the proper interpretation of a statute particularly where there is ambiguity or uncertainty. Until a court has ruled otherwise, legislative history may be considered instructive.

It should be kept in mind that some legislative history deserves greater weight than other legislative history. This point will have significance in the debate over the meaning of Section 108 as there is indeed uncertainty as to what is meant by certain words and phrases in the section, and there is conflict in the three congressional reports.

The Senate Report was first in time and accompanied the Senate version of the copyright bill which was not the version passed by Congress. The House Report accompanied the House version of the bill which was substantially the one that was passed by Congress. Accordingly, where the House and Senate Reports differ, we believe more weight should be given to the House Report. The most weight should probably be given to the Conference Report as it is in the House-Senate Conference Committee that differences between the House version and the Senate version of legislation are resolved and a final version of the bill is prepared.

We have selected for reference in this narrative those portions of the congressional reports which we consider relevant and important. However, until a court has ruled on the matter no one can be certain just what aspects, if any, of the congressional reports will turn out to be determinative. The interested librarian and counsel are urged to read all of the reports in their entirety.

When considering the scope of the rights granted by Sections 107 and 108, it should be kept in mind that copyright is a statutory monopoly. It is a monopoly which is undoubtedly founded on sound public policy but a monopoly nevertheless and, therefore, should be subject to the closest scrutiny by the courts. There is certainly nothing in the statute or in the legislative history which indicates that Congress intended that copyright owners acting alone or in concert are entitled to expand this monopoly beyond the limited grant contained in the statute.

It is hoped that this narrative will be of practical use to both librarians and their counsel. However, the document is not intended as an interpretation of the statute and does not constitute a legal opinion. Any specific question arising under the law should be determined solely by each library's own counsel.

SECTION 106. Exclusive rights in copyrighted works.

Section 106 contains the basic statutory grant of exclusive rights to the copyright owner. Included are the right to publish and reproduce the copyrighted work and the right to distribute copies to the public by sale, rental, lease or lending. Section 106 states:

> Subject to sections 107 through 118, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:
> (1) to reproduce the copyrighted work in copies or phonorecords;
> (2) to prepare derivative works based upon the copyrighted work;
> (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
> (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly; and
> (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly.

SECTION 107. Limitations on exclusive rights: Fair use.

Sections 107 and 108, limit the rights granted to the copyright owner by Section 106.

Section 107 provides that the *fair use* of a copyrighted work is not an infringement of the rights granted in Section 106. Section 107 is an express statutory recognition of the long established judicial doctrine of *fair use* which includes the landmark case of *Williams & Wilkins.*

Section 107 states:

> Notwithstanding the provisions of section 106, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include—
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
> (2) the nature of the copyrighted work;
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
> (4) the effect of the use upon the potential market for or value of the copyrighted work.

The House Report (page 66), makes it clear that Section 107 is intended to restate the judicial doctrine of *fair use*:

> The statement of the fair use doctrine in section 107 offers some guidance to users in determining when the principles of the doctrine apply. However, the endless variety of situations and combination of circumstances that can arise in particular cases precludes the formation of exact rules in the statute. The [copyright] bill endorses the purpose and general scope of the judicial doctrine of fair use, but there is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change. Beyond a very broad statutory explanation of what fair use is and *some* of the criteria applicable to it, the courts must be free to adapt the doctrine to particular situations on a case-by-case basis. *Section 107 is intended to restate the present judicial doctrine of fair use, not to change, narrow, or enlarge it in any way.* [Emphasis added.]

The doctrine of *fair use* first appeared in a decided case in the United States more than 100 years ago and has been applied to various situations in many cases.[4] The leading case involving *fair use* as it specifically applies to photocopying is *Williams & Wilkins Company v. United States*, 487 F.2d 1345 (Ct.Cl. 1973), *aff'd per curiam*, 420 U.S. 376 (1975). The Court of Claims held that under the facts and circumstances present in this case, the photocopying by the National Institutes of Health and the National Library of Medicine of articles in medical journals published by the plaintiff was *fair use*. In its discussion of what constitutes *fair use*, the Court stated at page 1352:

> Precisely because a determination that a use is "fair," or "unfair," depends on an evaluation of the complex of individual and varying factors bearing upon the particular use (see H.R.Rep. No. 83, 90th Cong., 1st Sess., p.29), there has been no exact or detailed definition of the doctrine. The courts, congressional committees, and scholars have had to be content with a general listing of the main considerations—together with the example of specific instances ruled "fair" or "unfair". These overall factors are now said to be: (a) the purpose and character of the use, (b) the nature of the copyrighted work, (c) the amount and substantiality of the material used in relation to the copyrighted work as a whole, and (d) the effect of the use on a copyright owner's potential market for and value of his work.

The similarity between the above quoted "general listing of the main considerations" with the four "factors to be considered" which now appear in Section 107 is apparent.

The Court commented on the basic public policy which underlies *fair use* as follows at page 1352:

> . . . [T]he development of "fair use" has been influenced by some tension between the direct aim of the copyright privilege to grant the owner a right from which he can reap financial benefit and the more fundamental purpose of the protection "To promote the Progress of Science and the useful Arts." U.S. Const., art. 1, §8. The House committee which recommended the 1909 Act said that copyright was "[n]ot primarily for the benefit of the author, but primarily for the benefit of the public." H.R.Rep. No. 2222, 60th Cong., 2nd Sess., p.7. The Supreme Court has stated that "The copyright law, like the patent statutes, makes reward to the owner a secondary consideration." *Mazer v. Stein*, 347 U.S. 201, 219, 74 S.Ct. 460, 471, 98 L.Ed. 630 (1954); *United States v. Paramount Pictures*, 334 U.S. 131, 158, 68 S.Ct. 915, 92 L.Ed. 1260 (1948). See Breyer, The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs, 84 Harv.L. Rev. 281 (1970). To serve the constitutional purpose, "'courts in passing upon particular claims of infringement must occasionally subordinate the copyright holder's interest in a maximum financial return to the greater public interest in the development of art, science and industry.' *Berlin v. E.C. Publication, Inc.* 329 F.2d 541, 544 (2d Cir. 1964). Whether the privilege may justifiably be applied to particular materials turns initially on the nature of the materials, e.g., whether their distribution would serve the public interest in the free dissemination of information and whether their preparation requires some use of prior materials dealing with the same subject matter. Consequently, the privilege has been applied to works in the fields of science, law, medicine, history and biography." *Rosemont Enterprises, Inc. v. Random House, Inc.* 366 F.2d 303, 307 (C.A. 2, 1966).

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[4]See *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841)

Citations of cases dealing with the general subject of *fair use* may be found in *West's Federal Practice Digests, Copyrights*, Sections 56, 57, 58 and 59.

The following Law Review articles are suggested to counsel:

1. M. V. Golub, "Not by Books Alone: Library Copying of Copyrighted Material." 70 *Law Library Journal* 153 (1977)
2. M. B. Nimmer, "Photocopying and Record Piracy: of Dred Scott and Alice in Wonderland." 22 *UCLA Law Review* 1052 (1975)
3. H. S. Perlman and L. H. Rhinelander, "Photocopying, Copyright and the Judicial Process." *1975 Supreme Court Review* 355
4. "Photocopying As Fair Use." *Boston College and Industrial Law Review* 145 (1974)
5. "Copyrights: Concurrence, Revisions and Photocopying." 79 *Dickinson Law Review* 260 (1975)
6. "Photocopying and Copyright Law." 63 *Kentucky Law Journal* 256 (1975)
7. "Infringement by Photocopying." 51 *Texas Law Review* 137 (1972)
8. "Photocopying and Distribution of Copyrighted Journal Articles." 25 *Vanderbilt Law Review* 1093 (1972)

The House Report (page 65) confirms that *fair use* is a rule of reason:

> Indeed, since the doctrine is an equitable rule of reason, no generally applicable definition is possible, and each case raising the question must be decided on its own facts.

The House Report (pages 65–66) gives a number of examples of copying that would be *fair use* as contemplated by Section 107, but makes little comment on the meaning of the language "for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research. . . ."

The House Report (page 65) cites examples of *fair use* from the *1961 Report of the Register of Copyrights:*

> . . . "quotation of excerpts in a review or criticism for purposes of illustration or comment; quotation of short passages in a scholarly or technical work, for illustration or clarification of the author's observations; use in a parody of some of the content of the work parodied; summary of an address or article, with brief quotations, in a news report; reproduction by a library of a portion of a work to replace part of a damaged copy; reproduction by a teacher or student of a small part of a work to illustrate a lesson; reproduction of a work in legislative or judicial proceedings or reports; incidental and fortuitous reproduction, in a newsreel or broadcast, of a work located in the scene of an event being reported."

The House Report (page 66) comments specifically on the language of Clause (1) of Section 107, and indicates that it is:

> . . . not intended to be interpreted as any sort of not-for-profit limitation on educational uses of copyrighted works. It is an express recognition that, as under the present law, the commercial or non-profit character of an activity, while not conclusive with respect to fair use, can and should be weighed along with other factors in fair use decisions.

The case law indicates that the presence of a commercial motivation does not preclude the availability of the right of *fair use.* See *Rosemont Enterprises v. Random House, Inc.*, 366 F.2d 303, 307, 308 (2d Cir. 1966), *cert. denied*, 385 U.S. 1009 (1967).

Two sets of specific guidelines were formulated with respect to what constitutes a *fair use* in two narrow areas and were made part of the House Report (pages 68–71): "Agreement on Guidelines for Classroom Copying in Not-For-Profit Educational Institutions with Respect to Books and Periodicals,"[5] and "Guidelines for Educational Uses of Music."[6] Both guidelines state that their purpose is to state the minimum and not the maximum standards of *fair use* in each of the two areas. No other specific guidelines have been formulated and accepted with respect to Section 107 and *fair use.* (A third set of guidelines, the so-called "CONTU Guidelines," are the "Guidelines for the Proviso of Subsection 108(g)(2)." These are discussed *infra* at pages 9–10.)

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[5]The "Guidelines for Classroom Copying" were promulgated by representatives of the Ad Hoc Committee of Educational Institutions and Organizations on Copyright Law Revision, the Authors' League of America, Inc., and the Association of American Publishers, Inc. These guidelines relate only to copies made of materials for classroom use and do not relate to copying of materials for college and university library reserve departments. Since the placing of multiple copies of a work on reserve in a college and university library could function as a substitute for the purchase of extra issues of a publication or reprints, this type of copying may satisfy neither the standards of Section 108 with respect to systematic copying, nor qualify for the *fair use* exemption.

[6]The "Guidelines for Educational Uses of Music" were promulgated by representatives of the Music Publishers' Association of the United States, Inc., the National Music Publishers' Association, Inc., the Music Teachers National Association, the Music Educators National Conference, the National Association of Schools of Music and the Ad Hoc Committee on Copyright Law Revision.

SECTION 108. Limitations on exclusive rights: Reproductions by libraries and archives.

Section 108 grants certain copying rights to libraries in addition to those granted by Section 107. Section 108 by its own terms does not affect the *fair use* rights in Section 107. Subsection 108(f)(4) states:

> Nothing in this section . . . in any way affects the right of fair use as provided by section 107.

Section 108 allows a library[7] or any of its employees, acting within the scope of their employment, to make no more than one copy or phonorecord of a work if certain conditions are met. The section is intended to cover single copies made on separate occasions. Subsection 108(g) states:

> The rights of reproduction and distribution under this section extend to the isolated and unrelated reproduction or distribution of a single copy or phonorecord of the same material on separate occasions . . . .

Arguably, the copying situations permitted by Section 108 are already within the doctrine of *fair use.* (For example, a single copy of an article made by a library at the request of a research worker for use in relation to his investigations is undoubtedly *fair use*; this situation is also described in Subsection 108(d).) Therefore, in many copying situations, the librarian will find that Sections 107 and 108 are equally applicable. As is emphasized above, the rights granted by Section 108 are in addition to the *fair use* rights in Section 107. Section 108 does not purport to conclusively define what is *fair use* in the situations referred to in Section 108.

The apparent complexity of Section 108 arises from the special and general conditions that are applied to the copying situations described plus the uncertain meaning of some of the words and phrases used (for example, "systematic" and "private study, scholarship, or research"). The use of some general language was probably unavoidable.

Despite the language, librarians should find the section reasonably comprehensible and applicable to many day-to-day activities in the library. A possible exception is photocopies in lieu of interlibrary loans and the effect of the so-called "CONTU Guidelines." These guidelines would impose on libraries requesting photocopies through interlibrary channels, a heavy and expensive burden of maintaining records. The implications of these guidelines are discussed below.

Notwithstanding the complexity we suggest one small cheer for Section 108. Where a copying situation fits within a particular provision of Section 108, the same is conclusively presumed to be legal. Obviously, libraries should make use of the section to the fullest extent possible. However, we suggest that Section 108 be kept in proper perspective. It is in addition to the right of *fair use* in Section 107 which has been and is expected to continue to be the basis for most library photocopying.

Subsection 108(a). Prerequisites for Section 108 copying privileges.

In Subsection 108(a), Clauses (1), (2) and (3) list three conditions, all of which must be met to obtain the copying rights set forth in Section 108. In other words, Subsection 108(a) is a sort of gatekeeper. To get inside Section 108, you must meet the required conditions which are:

> . . . (1) the reproduction or distribution is made without any purpose of direct or indirect commercial advantage;
>
> (2) the collections of the library or archives are (i) open to the public, or (ii) available not only to researchers affiliated with the library or archives or with the institution of which it is a part, but also to other persons doing research in a specialized field; and
>
> (3) the reproduction or distribution of the work includes a notice of copyright.

Subsection 108(a), Clause (1).

The first of the three conditions requires the absence of "any purpose of direct or indirect commercial advantage." Copies made for a "direct commercial advantage" would seem to imply an

[7]For simplicity of presentation, references in this narrative are only to libraries. Obviously, the section applies equally to archives.

immediate profit; for example, copies made for resale at a profit. However, copies made by a library within a profit-making institution would rarely, if ever, be made for resale at a profit. Normally such copies are made for use within the organization. Will this constitute a purpose having an "indirect commercial advantage"? The House Report (pages 74–75) speaks to the question as follows:

> The reference to "indirect commercial advantage" has raised questions as to the status of photocopyng done by or for libraries or archival collections within industrial, profitmaking or proprietary institutions (such as the research and development departments of chemical, pharmaceutical, automobile, and oil corporations, the library of a proprietary hospital, the collections owned by a law or medical partnership etc.).
>
> There is a direct interrelationship between this problem and the prohibitions against "multiple" and "systematic" photocopying in section 108(g)(1) and (2). Under section 108, a library in a profit-making organization would not be authorized to:
>
> (a) use a single subscription or copy to supply its employees with multiple copies of material relevant to their work; or
>
> (b) use a single subscription or copy to supply its employees, on request, with single copies of material relevant to their work, where the arrangement is "systematic" in the sense of deliberately substituting photocopying for subscription or purchase; or
>
> (c) use "interlibrary loan" arrangements for obtaining photocopies in such aggregate quantities as to substitute for subscriptions or purchase of material needed by employees in their work.
>
> Moreover, a library in a profit-making organization could not evade these obligations by installing reproducing equipment on its premises for unsupervised use by the organization's staff.
>
> Isolated, spontaneous making of single photocopies by a library in a for-profit organization, without any systematic effort to substitute photocopying for subscriptions or purchases, would be covered by section 108, even though the copies are furnished to the employees of the organization for use in their work. Similarly, for-profit libraries could participate in interlibrary arrangements for exchange of photocopies, as long as the production or distribution was not "systematic." These activities, by themselves, would ordinarily not be considered "for direct or indirect commercial advantages," since the "advantage" referred to in this clause must attach to the immediate commercial motivation behind the reproduction or distribution itself, rather than to the ultimate profit-making motivation behind the enterprise in which the library is located. On the other hand, section 108 would not excuse reproduction or distribution if there were a commercial motive behind the actual making or distributing of the copies, if multiple copies were made or distributed, or if the photocopying activities were "systematic" in the sense that their aim was to substitute for subscriptions or purchases.

The Senate Report on the Senate version of the bill, had presented a different interpretation of "indirect commercial advantage." The Senate Report (page 67) stated:

> The limitation . . . to reproduction and distribution by libraries and archives "without any purpose of direct or indirect commercial advantage" is intended to preclude a library or archives in a profit-making organization from providing photocopies of copyrighted materials to employees engaged in furtherance of the organization's commercial enterprise, unless such copying qualifies as a fair use, or the organization has obtained the necessary copyright licenses. A commercial organization should purchase the number of copies of a work that it requires, or obtain the consent of the copyright owner to the making of the photocopies.

The provisions of Section 108 in the House version of the bill were those finally adopted. The Conference Report supports the view of the House Report on the question of the interpretation of "indirect commercial advantage" by stating at page 73:

> As long as the library or archives meets the criteria in section 108(a) and the other requirements of the section, including the prohibitions against multiple and systematic copying in subsection (g), the conferees consider that the isolated, spontaneous making of single photocopies by a library or archives in a for-profit organization without any commercial motivation, or participation by such a library or archives in interlibrary arrangements, would come within the scope of section 108.

Subsection 108(a), Clause (2).

The second condition requires the library to be an open library or that its collection be available. The second clause provides:

> (2) the collections of the library or archives are (i) open to the public, or (ii) available not only to researchers affiliated with the library or archives or with the institution of which it is a part, but also to other persons doing research in a specialized field. . . .

This second condition may be met in one of two ways: the collections of the library must be open to the public, *or* the collections must be available not only to researchers affiliated with the library or the institution but also to other persons doing research in a specialized field.

In order to qualify as a library which is "open to the public," must the library be available free of charge? For example, is a university library which requires the payment of an annual fee "open to the public"? The statute and congressional reports are silent on the question of whether the presence or absence of a fee is relevant to either of the alternatives in Clause (2). It is certainly arguable that if the fee charged by the university library is reasonable that such a library is "open to the public." In any event, such a library would seem to be within the second alternative which covers the institutional library which may have restricted access, but whose collections are available to "other persons doing research in a specialized field." Most specialized libraries will be within this language. The requirement of availability would seem to be satisfied not only by permitting a personal visit (after making appropriate arrangements), but also by interlibrary loan of the physical volumes or by providing photocopies. Obviously excluded is the totally closed library, a relatively rare situation.

Subsection 108(a), Clause (3).

The third condition is that a reproduction or distribution of the work includes a notice of copyright. The third clause provides:

> (3) the reproduction or distribution of the work includes a notice of copyright.

There is no comment on this clause in the three congressional reports.

The Council of National Library Associations through its Committee on Copyright Law Practice and Implementation has recommended[8] that the following notice be placed on the reproduction of a work as required by Subsection 108(a)(3):

This material may be protected by copyright law. (Title 17, U.S. Code)

The conditional "may be protected" is necessitated by the fact that it is not possible to know at the time a copy is made whether the material is in fact validly copyrighted or not.

The presence of a notice of copyright does not necessarily mean that the material in fact is copyrighted. The material may have been originally published without the proper notice and have passed into the public domain. The item copied may contain both copyrighted material and uncopyrighted material. The many cases which have disputed the validity of copyright attest to the complexity of the question. An unconditional notice that the material "is protected" would be misleading.

It should also be noted that bound periodicals frequently do not include the title page or the masthead page which is the usual location of the copyright notice because such pages are often omitted along with pages containing advertising when binding occurs. As a result the determination of the copyright status of an article in a bound volume of a periodical would be difficult or, in cases involving older materials, often impossible.

Subsection 108(g)(1).

We are discussing this subsection out of order because it imposes a general condition on *all* copying which claims to be within Section 108. The subsection states:

> (g) The rights of reproduction and distribution under this section extend to the isolated and unrelated reproduction or distribution of a single copy or phonorecord of the same material on separate occasions, but do not extend to cases where the library or archives, or its employee—
>
> (1) is aware or has substantial reason to believe that it is engaging in the related or concerted reproduction or distribution of multiple copies or phonorecords of the same material, whether made on one occasion or over a period of time, and whether intended for aggregate use by one or more individuals or for separate use by the individual members of the group; ...

Thus, if the library is "aware or has substantial reason to believe" that the library or its employee is engaged in the described activity, the copying rights under Section 108 are not available.

The House Report (page 77) merely restates Subsection 108(g)(1) in its comments:

> Subsection (g) provides that the rights granted by this section extend only to the "isolated and unrelated reproduction of a single copy or phonorecord of the same material on separate occasions." However, this section does not authorize the related or concerted reproduction of multiple copies or

[8]This recommendation is contained in a statement submitted to the National Commission on New Technological Uses of Copyrighted Works (CONTU) dated Oct. 20, 1977. This statement was published in *American Libraries* 8, p. 530 (Nov 1977).

phonorecords of the same materials, whether made on one occasion or over a period of time, and whether intended for aggregate use by one individual or for separate use by the individual members of a group.

The Conference Report makes no comment on Subsection 108(g)(1).

Subsection 108(b). Archival reproduction of unpublished works.

Subsection 108(b) deals with the reproduction of an unpublished work for purposes of preservation and security or deposit for research use in another library or archives. The subsection states:

> (b) The rights of reproduction and distribution under this section apply to a copy or phonorecord of an unpublished work duplicated in facsimile form solely for purposes of preservation and security or for deposit for research use in another library or archives of the type described by clause (2) of subsection (a), if the copy or phonorecord reproduced is currently in the collections of the library or archives.

The House Report (page 75) and Senate Report (pages 67-68) on this subsection are identical. The Reports refer to the Subsection 108(b) situation as "archival reproduction" and state:

> Subsection (b) authorizes the reproduction and distribution of a copy or phonorecord of an unpublished work duplicated in facsimile form solely for the purposes of preservation and security, or for deposit for research use in another library or archives, if the copy or phonorecord reproduced is currently in the collections of the first library or archives. Only unpublished works could be reproduced under this exemption, but the right would extend to any type of work, including photographs, motion pictures and sound recordings. Under this exemption, for example, a repository could make photocopies of manuscripts by microfilm or electrostatic process, but could not reproduce the work in "machine-readable" language for storage in an information system.[9]

Subsection 108(c). Reproduction to replace damaged or lost works.

Subsection 108(c) allows reproduction of a published work for the purpose of replacement of a damaged, deteriorating, lost or stolen work. However, before a library can make a copy under this subsection it must determine after "reasonable effort" that an unused replacement cannot be obtained at a fair price.

The subsection provides:

> The right of reproduction under this section applies to a copy or phonorecord of a published work duplicated in facsimile form solely for the purpose of replacement of a copy or phonorecord that is damaged, deteriorating, lost, or stolen, if the library or archives has, after a reasonable effort, determined that an unused replacement cannot be obtained at a fair price.

Both the House Report (pages 75-76) and Senate Report (page 68) concentrate on clarifying the words "reasonable effort." The reports both state:

> The scope and nature of a reasonable investigation to determine that an unused replacement cannot be obtained will vary according to the circumstances of a particular situation. It will always require recourse to commonly-known trade sources in the United States,[10] and in the normal situation also to the publisher or other copyright owner (if such owner can be located at the address listed in the copyright registration), or an authorized reproducing service.

Note that the reasonable effort must be to obtain an "unused" replacement.

What would be a "fair price"? Stated in reverse, what would be an "unfair price"? The three congressional reports are silent on the question. Presumably, a work available at or near its original list price would definitely be available at a "fair price."

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[9]See pages 14-15 of this document for a discussion of Section 117, which deals with computers and similar information systems.

[10]For example, *Books in Print* or the like.

Subsection 108(d). Reproduction of articles and small excerpts; and Subsection 108(g)(2). Systematic reproduction.

Subsection 108(d) deals with the user request for a copy of all or part of one article from a periodical or some small part of another copyrighted work. It deals with copies made from the library's own collection or from that of another library—that is, an interlibrary transaction. In short, the subsection deals with the most common copying situation with which most libraries are concerned on a day-to-day basis.

Subsection 108(d) states:

> (d) The rights of reproduction and distribution under this section apply to a copy, made from the collection of a library or archives where the user makes his or her request or from that of another library or archives, of no more than one article or other contribution to a copyrighted collection or periodical issue, or to a copy or phonorecord of a small part of any other copyrighted work, if—
>
> (1) the copy or phonorecord becomes the property of the user, and the library or archives has had no notice that the copy or phonorecord would be used for any purpose other than private study, scholarship, or research; and,
>
> (2) the library or archives displays prominently, at the place where orders are accepted, and includes on its order form, a warning of copyright in accordance with requirements that the Register of Copyrights shall prescribe by regulation.

This relatively clear language must be read in conjunction with Subsection 108(g)(2) which is superimposed on Subsection 108(d). Subsection 108(g)(2) contains the famous "systematic/interlibrary arrangements" language which led to the so-called "CONTU Guidelines." We will first comment on Subsection 108(d) and subsequently on Subsection 108(g)(2).

The House Report (page 76) and the Senate Report (page 68), which are identical, do no more than paraphrase Subsection 108(d). The Conference Report does not discuss the subsection. As is indicated below, the House, Senate and Conference Reports all comment extensively on Subsection 108(g)(2).

The first condition under Subsection 108(d) is that the copy must become the property of the user and, that the library has had no notice that the copy would be used for any purpose other than "private study, scholarship, or research." In the usual situation, the library would not have notice of the purpose intended by a user who requests such a copy. In the absence of information to the contrary, it would seem reasonable to assume that the proposed use is some form of "private study, scholarship, or research." The congressional reports do not discuss what is meant by "private study, scholarship, or research."

The second condition is that the library display prominently at the place where reproduction requests are accepted, and include on the order form prepared by the library user, a Warning of Copyright in accordance with the regulations of the Register of Copyrights.[11]

Subsection 108(g)(2) states that the rights granted in Subsection 108(d) do not extend to the case where the library or its employee engages in "systematic" copying; however, certain interlibrary arrangements are nevertheless permitted. The subsection reads as follows:

> (g) The rights of reproduction and distribution under this section extend to the isolated and unrelated reproduction or distribution of a single copy or phonorecord of the same material on separate occasions, but do not extend to cases where the library or archives, or its employee—
>
> . . . .
>
> (2) engages in the systematic reproduction or distribution of single or multiple copies or phonorecords of material described in subsection (d): *Provided*, That nothing in this clause prevents a library or archives from participating in interlibrary arrangements that do not have, as their purpose or effect, that the library or archives receiving such copies or phonorecords for distribution does so in such aggregate quantities as to substitute for a subscription to or purchase of such work.

There is extensive commentary in the House, Senate and Conference Reports regarding Subsection 108(g)(2). Although the subsection is concerned with the "systematic reproduction or distribution of single or multiple photocopies of material described in subsection (d)," the word "systematic" is nowhere specifically defined. The Senate Report (page 70), which *predated* the inclusion of the proviso on interlibrary arrangements, states:

> Subsection (g) also provides that section 108 does not authorize the systematic reproduction or distribution of copies or phonorecords of articles or other contributions to copyrighted collections or

[11]These regulations will appear at 37 C.F.R. Section 201.14 and can presently be found at 42 *Fed. Reg.* page 59245 (Nov. 16, 1977). A copy of these regulations and the Warning of Copyright in the type sizes specified are in Appendix E (pink sheets) of this document.

periodicals or of small parts of other copyrighted works whether or not multiple copies are reproduced or distributed. Systematic reproduction or distribution occurs when a library makes copies of such materials available to other libraries or to groups of users under formal or informal arrangements whose purpose or effect is to have the reproducing library serve as their source of such material. Such systematic reproduction and distribution, as distinguished from isolated and unrelated reproduction or distribution, may substitute the copies reproduced by the source library for subscriptions or reprints or other copies which the receiving libraries or users might otherwise have purchased for themselves, from the publisher or the licensed reproducing agencies.

While it is not possible to formulate specific definitions of "systematic copying", the following examples serve to illustrate some of the copying prohibited by subsection (g).

(1) A library with a collection of journals in biology informs other libraries with similar collections that it will maintain and build its own collection and will make copies of articles from these journals available to them and their patrons on request. Accordingly, the other libraries discontinue or refrain from purchasing subscriptions to these journals and fulfill their patrons' requests for articles by obtaining photocopies from the source library.

(2) A research center employing a number of scientists and technicians subscribes to one or two copies of needed periodicals. By reproducing photocopies of articles the center is able to make the material in these periodicals available to its staff in the same manner which otherwise would have required multiple subscriptions.

(3) Several branches of a library system agree that one branch will subscribe to particular journals in lieu of each branch purchasing its own subscriptions, and the one subscribing branch will reproduce copies of articles from the publication for users of the other branches.

The House Report (page 77) comments that the inclusion of the "systematic" language in Subsection 108(g)(2) provoked a storm of controversy centering around the extent to which the restriction of "systematic" activities would adversely affect interlibrary networks and other arrangements involving the exchange of photocopies. Thereafter Congress added the proviso to the subsection which contains the key phrase "such aggregate quantities as to substitute for a subscription to or purchase of such work."

The House Report (page 78) commented that the National Commission on New Technological Uses of Copyrighted Works ("CONTU")[12] had offered its "good offices" to help develop guidelines covering practices under Subsection 108(g)(2). Guidelines were produced by CONTU and were included in the Conference Report (pages 72-74) under the heading, *Photocopying-Interlibrary Arrangements.*

The introduction to the guidelines states, "The Commission considers the guidelines which follow to be a workable and fair interpretation of the intent of the proviso portion of Subsection 108(g)(2)."

The Conference Report (page 71) states:

> . . . the guidelines are not intended as, and cannot be considered, explicit rules or directions governing any and all cases, now or in the future. It is recognized that their purpose is to provide guidance in the most commonly-encountered interlibrary photocopying situations, that they are not intended to be limiting or determinative in themselves or with respect to other situations, and that they deal with an evolving situation that will undoubtedly require their continuous reevaluation and adjustment.

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[12]CONTU was created by Congress in 1974, Pub.L. 93-573, 88 Stat. 1873-1875 as amended by Pub.L. 94-314, 90 Stat. 692; Pub.L. 95-146, 91 Stat. 1226. The statute creating CONTU can presently be found at 17 U.S.C.A. Section 701, note 1. The statute states *inter alia*:

> (b) The purpose of the Commission is to study and compile data on:
>
> (1) the reproduction and use of copyrighted works of authorship—
>
> (A) in conjunction with automatic systems capable of storing, processing, retrieving and transferring information, and
>
> (B) by various forms of machine reproduction, not including reproduction by or at the request of instructors for use in face-to-face teaching activities; and
>
> (2) the creation of new works by the application or intervention of such automatic systems or machine reproduction.
>
> (c) The Commission shall make recommendations as to such changes in copyright law or procedures that may be necessary to assure for such purposes access to copyrighted works, and to provide recognition of the rights of copyright owners.

CONTU is presently to terminate "on the sixtieth day after the date of the submission of its final report" to the President and the Congress which report is to be submitted on or before July 31, 1978. *Id.* 17 U.S.C.A. Section 701, note 1, Sections 206, 208.

Congressional Committee Reports which elucidate congressional intent are, of course, commonplace. However, the "CONTU Guidelines" appear to go beyond interpretation by imposing specific affirmative duties on both the requesting library and the supplying library. Thus, Guideline No. 3 states:

> No request for a copy or phonorecord of any material to which these guidelines apply may be fulfilled by the supplying entity unless such request is accompanied by a representation by the requesting entity that the request was made in conformity with these guidelines.

Guideline No. 4 states:

> The requesting entity shall maintain records of all requests made by it for copies or phonorecords of any materials to which these guidelines apply and shall maintain records of the fulfillment of such requests, which records shall be retained until the end of the third complete calendar year after the end of the calendar year in which the respective request shall have been made.

The possibility that some part or all of the interlibrary arrangements of a particular library are within the general right of *fair use* pursuant to Section 107 should be considered. The Revised Interlibrary Loan Form allows a requesting library to request a copy either in conformance with Subsection 108(g)(2) and the "CONTU Guidelines" or in conformance with "other provisions of the copyright law" such as the doctrine of *fair use.*

The new copyright law obviously has not yet been the subject of any judicial interpretation. Such interpretation, in due course, will doubtless consider whether these guidelines are in any or all circumstances a correct interpretation of Subsection 108(g)(2) as well as the relationship between *fair use* under Section 107 and Subsection 108 generally.

Subsection 108(e). Reproduction of out-of-print works.

This subsection allows a library or its employee to respond to a user request for a copy of an entire work or a substantial part of it if certain conditions are met.

Subsection 108(e) provides:

> (e) The rights of reproduction and distribution under this section apply to the entire work, or to a substantial part of it, made from the collection of a library or archives where the user makes his or her request or from that of another library or archives, if the library or archives has first determined, on the basis of a reasonable investigation, that a copy or phonorecord of the copyrighted work cannot be obtained at a pair[13] price, if:
>
> (1) the copy or phonorecord becomes the property of the user, and the library or archives has had no notice that the copy or phonorecord would be used for any purpose other than private study, scholarship, or research; and
>
> (2) the library or archives displays prominently, at the place where orders are accepted, and includes on its order form, a warning of copyright in accordance with requirements that the Register of Copyrights shall prescribe by regulation.

According to both the House Report (page 76) and Senate Report (pages 68–69) which are identical:

> The scope and nature of a reasonable investigation to determine that an unused copy cannot be obtained will vary according to the circumstances of a particular situation. It will always require recourse to commonly-known trade sources in the United States, and in the normal situation also to the publisher or other copyright owner (if the owner can be located at the address listed in the copyright registration), or an authorized reproducing service.

The above comment on the scope and nature of a "reasonable investigation" is identical to the comment in the House and Senate Reports on the "reasonable effort" a library must make to locate an unused replacement under Subsection 108(c).

Note that, unlike the similar requirement in Subsection 108(c), the word "unused" is not included in the requirement of a reasonable investigation under Subsection 108(e). It could be argued that this omission implies that the library's investigation must extend to both used and unused works. However, as the requirement of a "reasonable investigation" is presumably to protect the copyright owner, a search for a used copy of a work would have little relevance as the location and purchase of a used work would result in no benefit to the copyright owner. If the library's reasonable

[13] As printed in the statute; doubtless it should read "fair."

investigation must relate not only to unused copies, but also to used copies, the scope of the investigation would necessarily have to go beyond *Books in Print* or the like, and the determination of a "fair price" becomes less certain.

The two conditions under Subsection 108(e) must be met in the case of the reproduction of an entire work. The first condition under Subsection 108(e) is that the copy must become the property of the user and, that the library has had no notice that the copy would be used for any purpose other than "private study, scholarship, or research." In the usual situation, the library would not have notice of the purpose intended by a user who requests such a copy. In the absence of information to the contrary, it would seem reasonable to assume that the proposed use is some form of "private study, scholarship, or research." The congressional reports do not discuss what is meant by "private study, scholarship, or research."

The second condition is that the library display prominently at the place where reproduction requests are accepted, and include in the order form, prepared by the library user, a Warning of Copyright in accordance with the regulations of the Register of Copyrights.[14]

Subsection 108(f). General exemptions.

The House Report (page 77) discussion of Subsection 108(f) states:

> It is the intent of this legislation that a subsequent unlawful use by a user of a copy or phonorecord of a work lawfully made by a library, shall not make the library liable for such improper use.

The Senate Report (page 69) is to the same effect.

Subsection 108(f), Clause (1).

Subsection 108(f)(1) deals with the use of copying equipment on library premises that is unsupervised by library staff. The subsection provides:

> (f) Nothing in this section—
>
> (1) shall be construed to impose liability for copyright infringement upon a library or archives or its employees for the unsupervised use of reproducing equipment located on its premises: *Provided*, That such equipment displays a notice that the making of a copy may be subject to the copyright law; . . . .

The commentary of both the House Report (page 76) and Senate Report (page 69) on this subsection are the same. The reports both state that a library or its employees are exempt from liability, for the unsupervised use of reproducing equipment located on its premises if the reproducing equipment bears a notice that the making of a copy may be subject to the copyright law. The Conference Report makes no comment on this subsection.

The Council of National Library Associations, through its Committee on Copyright Law Practice and Implementation, has recommended[15] a notice to be displayed on unsupervised reproducing equipment in a library or archives as required by Subsection 108(f)(1). The recommended notice states:

> **The U.S. Copyright Law (Title 17, U.S. Code) governs the making of photocopies of copyrighted material. The person using this equipment is liable for any infringement.**

Subsection 108(f), Clause (2).

Subsection 108(f)(2) distinguishes between user liability and library liability for infringement. Subsection 108(f)(2) provides:

> (f) Nothing in this section—
>
> . . . .
>
> (2) excuses a person who uses such reproducing equipment or who requests a copy or phonorecord under subsection (d) from liability for copyright infringement for any such act, or for any later use of such copy or phonorecord, if it exceeds fair use as provided by section 107. . . .

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[14]See Note 11 on page 8.

[15]This notice obviously contemplates display on photocopying equipment. Unsupervised equipment to make copies of tapes or discs would require a somewhat different notice. One possibility would be: "The U.S. Copyright Law (Title 17, U.S. Code) governs the making of copies of copyrighted material. The person using this equipment is liable for any infringement."

The result of the subsection is to establish a "two-tiered" approach which separates the library which makes copies under Section 108 and the user. Thus, the library which complies with the provisions of Section 108 would be protected despite use by the user which exceeds *fair use*. As some libraries cannot afford to supervise reproducing equipment and as libraries will normally not have notice of the purpose for which a copy is made, pursuant to a request under Subsection 108(d), this approach seems eminently practical. Subsection 108(f)(2) is a reminder that Section 108 rights extend only to a library and not to a user requesting a copy under Subsection 108(d) or making a copy on unsupervised equipment.

It is again emphasized that libraries have photocopying rights under the *fair use* doctrine of Section 107 which are separate from the rights under Section 108. According to the comments on this subsection in both the House Report (page 76) and Senate Report (page 69), Subsection 108(f)(1) does not extend to the person using the unsupervised reproducing equipment or requesting a copy under Subsection 108(d) if the use exceeds *fair use*. Also, according to the House and Senate Reports, as far as the person is concerned, "the copy or phonorecord made is not considered 'lawfully' made for purposes of sections 109, 110 or other provisions of the title."[16]

Subsection 108(f), Clause (3).

Subsection 108(f)(3) specifically allows the reproduction and distribution of an audiovisual news program by a library if the three conditions of Subsection 108(a) are satisfied.

Subsection 108(f)(3) provides:

> (f) Nothing in this section—
>
> . . . .
>
> (3) shall be construed to limit the reproduction and distribution by lending of a limited number of copies and excerpts by a library or archives of an audiovisual news program, subject to clauses (1), (2), and (3) of subsection (a); . . . .

The House Report (page 77) states:

> This exemption is intended to apply to the daily newscasts of the national television networks, which report the major events of the day. It does not apply to documentary (except documentary programs involving news reporting as that term is used in section 107), magazine-format or other public affairs broadcasts dealing with subjects of general interest to the viewing public.
>
> The clause . . . is intended to permit libraries and archives, subject to the general conditions of this section, to make off-the-air videotape recordings of daily network newscasts for limited distribution to scholars and researchers for use in research purposes.

The Conference Report makes additional comment on the meaning of the phrase "audiovisual news program." The Conference Report (page 73) states:

> The conferees believe that, under the provision as adopted in the conference substitute, a library or archives qualifying under section 108(a) would be free, without regard to the archival activities of the Library of Congress or any other organization, to reproduce, on videotape or any other medium of fixation or reproduction, local, regional, or network newscasts, interviews concerning current news events, and on-the-spot coverage of news events, and to distribute a limited number of reproductions of such a program on a loan basis.

The Senate Report (page 69) indicates that the subsection was included to prevent the copyright law from precluding operations such as the Vanderbilt University Television News Archive, which makes videotape recordings of television news programs and leases copies of broadcasts upon request to scholars and researchers.

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[16]Section 109 deals with a limitation on the exclusive rights provided by Section 106, with respect to the effect of transfer of a copy or phonorecord. According to the House Report (page 79), Subsection 109(a) confirms the principle that where the copyright owner has transferred ownership of a particular copy, or where a copy is lawfully made under the copyright law, the person owning the copy may dispose of it by sale, rental or any other means. Subsection 109(b) grants a similar right to the owner of a copy transferred from the copyright owner, or lawfully made, with respect to display of the copy. Subsection 109(c) distinguishes actual ownership of a copy from mere possession. Section 110 deals with a limitation on the exclusive rights provided by Section 106 with respect to certain performances or displays, such as performance or display of a work by instructors or pupils in the course of face-to-face teaching activities of a nonprofit educational institution, performance of a nondramatic literary or musical work or display of a work of a religious nature in the course of religious services, and performance of a nondramatic literary work in the course of a transmission for blind persons.

Subsection 108(f), Clause (4).

Pursuant to Subsection 108(f)(4) neither the right of *fair use* nor any contractual obligations assumed by a library when it obtained a copy of a work for its collections are affected by Section 108.

Subsection 108(f)(4) provides:

> (f) Nothing in this section—
>
> . . . .
>
> (4) in any way affects the right of fair use as provided by section 107, or any contractual obligations assumed at any time by the library or archives when it obtained a copy or phonorecord of a work in its collections.

Obviously if a library does not contract to restrict its copying privileges, the library retains all copying rights under Sections 107 and 108. For example, the selection of a lower price option under a double-tier subscription arrangement, would not abrogate, under subscription agreements commonly in use today, copying privileges under Sections 107 and 108. According to the House Report (page 77):

> . . . if there is an express contractual prohibition against reproduction for any purpose, this legislation shall not be construed as justifying a violation of the contract. This clause is intended to encompass the situation where an individual makes papers, manuscripts or other works available to a library with the understanding that they will not be reproduced.

Subsection 108(g). Multiple copies and systematic reproduction.

Subsection 108(g)(1)

Subsection 108(g)(1) is discussed above at pages 6–7.

Subsection 108(g)(2)

Subsection 108(g)(2) is discussed above at pages 8–10.

Subsection 108(h). Limitations on musical, pictorial, graphic or sculptural works.

Subsection 108(h) partially excludes certain works from the scope of Section 108. The subsection provides:

> (h) The rights of reproduction and distribution under this section do not apply to a musical work, a pictorial, graphic or sculptural work, or a motion picture or other audiovisual work other than an audiovisual work dealing with news, except that no such limitation shall apply with respect to rights granted by subsections (b) and (c), or with respect to pictorial or graphic works published as illustrations, diagrams, or similar adjuncts to works of which copies are reproduced or distributed in accordance with subsections (d) and (e).

Subsection 108(h), in spite of its limitation on reproduction of pictorial or graphic works, entitles a library to make copies of pictures or graphs if they are part of a work being copied by the library under Subsections 108(d) and 108(e). Also note that with respect to the Subsection 108(b) right of preservation and the Subsection 108(c) right of replacement, Subsection 108(h) allows a library to make copies of works in the categories proscribed by Subsection 108(h).

The House Report (page 78) explains that the term "audiovisual work dealing with news" shall have the same meaning as the same phrase in Subsection 108(f)(3). It also states that the Subsection 108(h) exclusion does not apply to archival reproduction under Subsection 108(b), nor does it apply to replacement of damaged or lost copies or phonorecords under Subsection 108(c).

The House Report (page 78) stresses that although Subsection 108(h) generally removes musical, graphic and audiovisual works from the Section 108 reproduction privilege, " . . . the doctrine of fair use under section 107 remains fully applicable to the photocopying or other reproduction of such works." The House Report (page 78) provides an example of a permissible reproduction of a work of music:

> In the case of music, for example, it would be fair use for a scholar doing musicological research to have a library supply a copy of a portion of a score or to reproduce portions of a phonorecord of a work.

On the subject of *fair use* and its relation to Subsection 108(h) the House Report (page 78) goes on to conclude:

> Nothing in section 108 impairs the applicability of the fair use doctrine to a wide variety of situations involving photocopying or other reproduction by a library of copyrighted material in its collections, where the user requests the reproduction for legitimate scholarly or research purposes.

The Senate Report (page 71) makes no substantive comment on Subsection 108(h); and the Conference Report makes no comment at all.

Subsection 108(i). Five year reviews.

The last subsection of Section 108 provides for a review and report by the Register of Copyrights every five years on the effectiveness of the new law in achieving the intended balance between the rights of creators and the needs of users. The subsection provides:

> (i) Five years from the effective date of this Act, and at five year intervals thereafter, the Register of Copyrights, after consulting with representatives of authors, book and periodical publishers, and other owners of copyrighted materials, and with representatives of library users and librarians, shall submit to the Congress a report setting forth the extent to which this section has achieved the intended statutory balancing of the rights of creators, and the needs of users. The report should also describe any problems that may have arisen, and present legislative or other recommendations, if warranted.

The House Report (page 78) makes no comment on the subsection other than summarizing its provisions.

It should be noted that CONTU has suggested that its guidelines be part of this five year review. Thus Guideline No. 5 in the Conference Report (page 73) states:

> 5. As part of the review provided for in subsection 108(i), these guidelines shall be reviewed not later than five years from the effective date of this bill.

SECTION 117. Scope of exclusive rights: Use in conjunction with computers and similar information systems.

Section 117 deals with computers. It provides:

> Notwithstanding the provisions of sections 106 through 116 and 118, this title does not afford to the owner of copyright in a work any greater or lesser rights with respect to the use of the work in conjunction with automatic systems capable of storing, processing, retrieving, or transferring information, or in conjunction with any similar device, machine, or process, than those afforded to works under the law, whether title 17 or the common law or statutes of a State, in effect on December 31, 1977, as held applicable and construed by a court in an action brought under this title.

The practical effect of this section is to preserve the legal status quo with respect to computer uses of copyrighted materials. The House Report (page 116) discusses Section 117 as follows:

> As the program for general revision of the copyright law has evolved, it has become increasingly apparent that in one major area the problems are not sufficiently developed for a definitive legislative solution. This is the area of computer uses of copyrighted works: the use of a work "in conjunction with automatic systems capable of storing, processing, retrieving, or transferring information." The Commission on New Technological Uses is, among other things, now engaged in making a thorough study of the emerging patterns in this field and it will, on the basis of its findings, recommend definitive copyright provisions to deal with the situation.
>
> Since it would be premature to change existing law on computer uses at present, the purpose of section 117 is to preserve the status quo. It is intended neither to cut off any rights that may now

exist, nor to create new rights that might be denied under the Act of 1909 or under common law principles currently applicable.

The provision deals only with the exclusive rights of a copyright owner with respect to computer uses, that is, the bundle of rights specified for other types of uses in section 106 and qualified in sections 107 through 116 and 118. With respect to the copyright-ability of computer programs, the ownership of copyrights in them, the term of protection, and the formal requirements of the remainder of the bill, the new statute would apply.

Under section 117, an action for infringement of a copyrighted work by means of a computer would necessarily be a federal action brought under the new title 17. The court, in deciding the scope of exclusive rights in the computer area, would first need to determine the applicable law, whether State statutory or common law or the Act of 1909. Having determined what law was applicable, its decision would depend upon its interpretation of what that law was on the point on the day before the effective date of the new statute.

The comments in the Senate Report (pages 99-100) are substantially the same as those in the House Report. There is no comment on Section 117 in the Conference Report.

SECTIONS 501—505. Infringement and remedies.

The provisions on infringement of the Copyright Law are contained in Chapter 5 of the Act. Subsection 501(a) provides:

> (a) Anyone who violates any of the exclusive rights of the copyright owner as provided by sections 106 through 118, or who imports copies or phonorecords into the United States in violation of section 602, is an infringer of the copyright.[17]

Subsection 501(b) gives the legal or beneficial owner of an exclusive right under a copyright the right to institute an action for infringement. Remedies for the owner of a copyright which has been infringed are provided in Sections 502, 503, 504 and 505. Section 502 gives a court the power to grant an injunction to prevent or restrain infringement of a copyright. Section 503 grants a court the power to impound and destroy copies made in violation of the copyright owner's exclusive rights.

Section 504 deals with award of damages and provides that the infringer of copyright is liable to the copyright owner for either actual damages and loss of profits, or statutory damages as provided by Subsection 504(c). According to Subsection 504(c)(1) the copyright owner may elect recovery of either actual damages or statutory damages. Statutory damages are defined as an amount of not less than $250 or more than $10,000 as the court considers just; and if the infringement is considered by the court to be willful, the award may be increased to not more than $50,000.

Where an infringer proves to the court that he was unaware his acts constituted infringement, the court may reduce the statutory damages to a sum of not less than $100.

A further provision in Subsection 504(c)(2) provides that:

> The court shall remit statutory damages in any case where an infringer believed and had reasonable grounds for believing that his or her use of the copyrighted work was a fair use under section 107, if the infringer was: (i) an employee or agent of a nonprofit educational institution, library or archives acting within the scope of his or her employment who, or such institution, library, or archives itself, which infringed by reproducing the work in copies or phonorecords; or (ii) a public broadcasting entity which or a person who, as a regular part of the nonprofit activities of a public broadcasting entity (as defined in subsection (g) of section 118) infringed by performing a published nondramatic literary work or by reproducing a transmission program embodying a performance of such a work.

According to the House Report (page 163), the special situation in Subsection 504(c)(2)(i) applies only to "teachers, librarians, archivists, and public broadcasters, and the nonprofit institutions of which they are a part."

Section 505 grants to a court the power to award costs and also reasonable attorney's fees to the prevailing party in any civil action for infringement.

The remaining sections of Chapter 5 deal with other aspects of infringement and remedies.

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[17]Section 602 deals with infringing importation of copies or phonorecords into the United States.

APPENDIX C

THE COPYRIGHT LAW AND THE HEALTH SCIENCES LIBRARIAN

MEDICAL LIBRARY ASSOCIATION
CHICAGO, 1978

TABLE OF CONTENTS

PREFACE

The signing into law of the general revision of the copyright law, Public Law 94-553, on October 19, 1976, by President Gerald R. Ford marked the end of a long, tedious process to update the outmoded copyright law of 1909. That date also marked the beginning of a period of concern and anxiety over varying interpretations of sections of the law, already noted for their ambiguities and inconsistencies. The need for guidelines and advice became apparent. Various associations representing the interests of publishers and producers of print and non-print materials immediately issues pamphlets and brochures representing their points of view. The American Library Association issued the *LIBRARIAN'S GUIDE TO THE NEW COPYRIGHT LAW* in November, 1976. The National Educational Association and other educational groups issued guidelines late in 1977.

The Medical Library Association has worked to prepare for implementation of the new law through active membership in the Council of National Library Associations' (CNLA) Committee on Copyright Law Practice and Implementation, which represents the American Library Association, the Association of Research Libraries, the American Association of Law Libraries, the Medical Library Association, the Music Library Association and the Special Libraries Association. Advisory statements will periodically be issued by this committee.

From the many letters asking for guidance, it became apparent to the MLA Legislation Committee that the membership found the existing guides and the law itself difficult to interpret and apply to individual situations. The idea of a special MLA brochure, organized by types of library activities and services, arose from these factors. In June 1977, the Board of Directors approved the preparation and distribution of this brochure.

The result in hand is the work of a subcommittee of the Legislation Committee. The contents were reviewed by the law firm of Mitchell, Russell and Kelly, Chicago, Illinois, and by the CNLA Committee on Copyright Law Practice and Implementation.

This subcommittee thanks the MLA headquarters, the Board of Directors, and the Legislation Committee for their support and assistance.

We are particularly grateful to Albert M. Berkowitz, Chief, Reference Services Division, National Library of Medicine, who served us as a resource person and a sounding board.

Nina W. Matheson, Director, Paul H. Himmelfarb Health Sciences Library, George Washington University Medical Center, Chairman
Steven L. Sowell, Assistant Reference Librarian, John Vinton Dahlgren Memorial Library, Georgetown University Medical Center
Martha S. Young, Medical Librarian, Washington Hospital Center

Subcommittee to Draft the Copyright Brochure,
Legislation Committee
November, 1977

I. INTRODUCTION

This brochure is written to assist health sciences librarians apply the new copyright law in their libraries. It is not intended as legal advice nor is it to serve as a set of rules or procedures. It cannot replace the use of judgment and the application of the test of reason to individual situations. Nor is it the last and final word. Additional advisory statements will be issued from time to time by the MLA, other library associations, and by the CNLA Committee on Copyright Law Practice and Implementation. Watch the *MLA News* and *American Libraries* for current updated information.

Public Law 94-553 has an effective date of January 1, 1978. Some provisions are ambiguous; they are open to various interpretations about many practices and silent altogether about others. Members are advised to approach the next five years as a testing period for the law and to accumulate data to support possible changes in the law.

Librarians must be familiar with the law and its implications in order to serve the best interests of the medical community who both use and create knowledge. This brochure is organized to make the law as accessible as possible to the practicing librarian or technical worker. Following a discussion of the pertinent sections of the law is a statement concerning the responsibilities of the librarian to notify the health sciences community of the broader implications of the law. Next, the guidelines for five service areas are developed: audiovisual materials, collection maintenance, interlibrary loan, photocopy services and reserve collections. Each section is organized to define the service, identify the sections of the law relevant to the service, comment on common practices, and indicate any record-keeping requirements. This results in considerable redundancy, which is intended to spare the reader onerous and constant cross-referencing.

Pertinent sections of the law and two guidelines from the congressional reports on sections 107 and 108(g)(2) are appended. Remember that the guidelines were intended to help interpret the law. They do not carry the force of law. It is not necessarily a violation of the law to exceed their recommendations.

Much of the information contained in this publication was excerpted and extracted from the documents in the Appendices. This publication is intended to supplement them and the documents cited in the References and Reading List.

II. PERTINENT SECTIONS OF THE LAW

The new law extends the length of copyright to the life of the author plus 50 years, provides statutory recognition to "fair use" for the first time, and covers both published and unpublished works. It does not set up licensing or royalty payment arrangements for library copying, but states the kinds of copying libraries may do without such arrangements.

Copyright extends to a wide variety of works: literary, musical, dramatic, pantomime and choreographic, pictorial and graphic, sculptural and audiovisual. Many journals, however, especially those published by scholarly associations, waive their exclusive rights and permit reproduction of articles for not-for-profit scholarly, research or teaching purposes without permission. In general, works of the United States government are not protected by copyright (See Appendix A, Section 105). Some publications prepared or supported through federal funding may also be exempted from copyright. (See Appendix D.)

There are three sections of the law which are of particular interest to most librarians: sections 106, 107, and 108.

Section 106 states the five exclusive rights of copyright owners: to reproduce the work, to prepare derivative works (new versions) and to distribute, perform and display the work publicly. Limitations on these exclusive rights are stated in sections 107 through 118. Sections 109, and 111 through 118 are not considered in this document.

Section 107 recognizes the doctrine of fair use.

The Senate Committee report on the copyright bill states:

> "Although the courts have considered and ruled upon the fair use doctrine over and over again, no real definition of the concept has ever emerged. Indeed, since the doctrine is an equitable rule of reason, no generally applicable definition is possible, and each case raising the question must be decided on its own facts. . . . The statement of the fair use doctrine in section 107 offers some guidance to users in determining when the principles of the doctrine apply. However, the endless variety of situations and combinations of circumstances that can rise in a particular case precludes the formulation of exact rules in the statute. The bill endorses the purpose and general scope of the judicial doctrine of fair use, as outlined earlier in this report, but there is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change. Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the courts must be free to adapt the doctrine to particular situations on a case-by-case basis. *Section 107 is intended to restate the present judicial doctrine of fair use, not to change, narrow or enlarge it in any way." (Editorial emphasis).*

According to the statute, "the fair use of a copyrighted work, including such use by reproduction in copies . . . . for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright." It then specifies the four factors to be considered in determining whether the use made is a fair use: the purpose and character of the use; the nature of the work; the amount and substantiality of the portion used in relation to the work as a whole; and the effect of the use on the potential market for or value of the work.

Section 108 authorizes libraries to engage in certain types of copying in situations other than fair use. The section opens with a statement of the general conditions applicable to all types of copying under the section: that no more than one copy can be made without any purpose of direct or indirect commercial advantage; that the library's collection be open to the public, or, that the collection be available not only to researchers affiliated with the library, but also to persons doing research in a specialized field; and that the reproduction include a notice of copyright.

The remaining subsections address:

- making of a copy of an unpublished work solely for purposes of preservation, security, or deposit in another library for research purposes;
- copying for replacement of a damaged, deteriorating, lost or stolen published item;
- making of a single copy of a single article or small part of a work from the library's collection or distributing such a copy obtained through interlibrary loan;
- conditions under which an entire work or a substantial part of it may be copied;
- liability in the case of unsupervised use of reproducing equipment;
- isolated and unrelated versus related, concerted, or systematic reproduction or distribution of a single copy of a work;
- exclusion of pictorial, graphic works and other audiovisual works from most reproduction and distribution rights, and;
- the requirement of the law that the Register of Copyrights report to the Congress January 1, 1983, and at five-year intervals thereafter, the extent to which section 108(g) achieved the intended statutory balancing of the rights of creators and the needs of users.

Several other sections of the law important to health sciences librarians are reproduced in Appendix A.

Section 104(b) specifies the conditions under which works published in a foreign nation or by a foreign national are protected.

Section 105 states that copyright protection is not available for any work of the U.S. government, which is defined as a work prepared by an officer or employee of the U.S. government as a part of that person's official duties. The U.S. government, however, is not precluded from receiving and holding copyrights transferred to it by assignment, bequest or otherwise.

Section 110(1) authorizes certain performances and displays in non-profit educational institutions.

Sections 504 and 506(a) spell out the liabilities of copyright infringements. In general, the copyright law with respect to library operations is civil, not criminal, law. Section 504(2)(i) says that an employee of a library acting within the scope of his or her employment believing that his or her use of the copyrighted work was a fair use under section 107 shall not be liable for statutory damages. However, infringement can still result in 1) collection of actual monetary damages, and 2) recovery of court costs and attorney's fees. Under section 506(a), willful infringement for purposes of commercial advantage or private financial gain is criminal and can result in a fine or imprisonment.

In view of the five-year period during which current practices and the new law will be put to the test, libraries need not drastically alter their ways of providing service and should maintain adequate records documenting the impact of the law.

Before discussing application of sections of the law to particular library functions, a final reminder is in order: nothing can replace the exercise of judgment and reason. With the application of judgment and reason all that is necessary is adherence to the requirements of the law; no less, and no more.

III. THE LIBRARY'S RESPONSIBILITIES WITHIN THE INSTITUTION

Librarians have the professional responsibility to inform their institution's administration and their clientele of the provisions of the copyright law. In addition to informing the institution on the general provisions of the law, each library must establish clear written policies and describe the steps it takes to comply with the law. Librarians should be aware of the implications of the changes in copyright law as they affect authors' rights. Libraries should have available materials that will inform authors of their rights under the new law.

This brochure contains recommendations for applying the law in common library service areas. Among other things, libraries must:

1) Post a notice at the library photocopier,
2) Post a warning of copyright at the place where interlibrary loan or photocopy requests are taken,
3) Reproduce the same notice on its internal interlibrary loan request forms, and indicate conformance with the law or guidelines on those forms sent to other libraries,
4) Include a notice on copyrighted material photocopied by the library, and
5) Maintain records of filled interlibrary loan requests.

Just as a library must comply with the requirements of this law, it has the equal responsibility to go no further than the law requires.

Some sections of the law represent compromises and are susceptible to interpretation. Much, if not most, of the copying done by the majority of health science libraries is legal under the new law and requires neither permission from the copyright holder nor the payment of any license fees or royalties. Libraries must exercise their full rights under the law, lest in practice the law become more restrictive than intended.

IV. GUIDELINES FOR SERVICES

A. Audiovisual learning centers

B. Collection maintenance

C. Interlibrary loan
- **1. Borrowing library**
- **2. Lending library**

D. Photocopy services
- **1. Unsupervised**
- **2. Supervised**

E. Reserve collection

A. AUDIOVISUAL LEARNING CENTERS

Definition

These comments apply to the operation of audiovisual learning centers in libraries. The term audiovisual applies to software such as films, filmstrips, audiotapes, videotapes, slides, slide-tapes and mixed media kits. Books and journals in microform being facsimile reproductions of print materials are not considered audiovisuals.

Pertinent Sections of the law

Section 107 with its concept of fair use is the primary guide for the audiovisual librarian. The audiovisual librarian must consider four factors in determining whether a particular case is fair use: 1)

purpose and character of the use; 2) the nature of the work; 3) the amount and substantiality of the portion used in relation to the work as a whole; 4) and the effect of the use on the potential market for or value of the work. The limited multiple copying privileges for classroom purposes under the *Guidelines for Classroom Copying in Not-for-Profit Educational Institutions* (Appendix B) do not apply to audiovisual works.

Only three subsections of section 108 apply to audiovisuals. Subsection (b) permits the reproduction of a copy of an *unpublished* work for the purposes of preservation and security. Subsection (c) allows duplication of a copy of a *published* work for the purpose of replacement of a damaged, deteriorating, lost or stolen work, if an unused replacement cannot be obtained at a fair price after a reasonable effort. Subsection 108(f)(4) states that the rights of reproduction granted libraries by section 108 do not override any contractual obligation assumed by the library at the time it obtains a work for its collections. AV librarians must be especially sensitive to conditions attached to the purchase of materials, since such conditions could prohibit the exercise of fair use rights under section 107 or reproduction rights under section 108.

Section 110(1) permits the performance or display of a copyrighted work in a group setting, such as a classroom or library, in the course of teaching activities.

Except for these sections, there are few guides that apply to the use of audiovisual materials generally found in health sciences centers. AV librarians must be prepared to apply the rule of reason and fair use to justify their practices where these are not already permitted through a contractual purchase agreement or a permission from the copyright holder.

Common Practices

Reformatting without copying. Many libraries convert filmstrips into slide format by cutting and remounting frames without the permission of the copyright holder. This practice appears acceptable if it does not alter the content or intention of the work.

Reformatting by facsimile. Some libraries with specific curriculum requirements and learning approaches need materials in one format rather than another. While reformatting of a 16mm film not commercially available in videotape may be defensible under section 107, this may be an instance where the purchase contract should specify the privilege of reformatting as required by the instructional purposes of the institution.

Copying for replacement of damaged material. A videotape becomes jammed in a playback unit and is partially ruined. Can you make a copy on a new tape? Section 108(c) allows duplication of published audiovisual materials for the purpose of replacement, if the library has determined after a reasonable effort than an unused replacement cannot be obtained at a fair price. One commentator says, " . . . the issue reduces itself down to what is a 'fair price'—for what you are seeking and not necessarily for what is being sold. Thirty-five hundred dollars is a fair price for some automobiles, but rather high if one is only interested in buying a new tire. Similarly, the unavailability of a replacement issue of a periodical (or a segment of a videotape—editor's comment), except as a part of an entire back-ordered volume, may mean that the issue is not available at a fair price." (Flacks, p.253)

Copying in anticipation of deterioration or damage. Some media centers routinely make a duplicate copy of certain vulnerable types of software recognizing that mechanical failures in equipment will result in damage and deterioration. The original is stored as an archival copy. It would be advisable to secure permission or specify your intention at the time of purchase.

Conditional purchasing. Certain media centers place conditions on their purchases of audiovisuals to assure agreement to an expected practice. Libraries may use language on the purchase order similar to the following: "By the acceptance of this order, permission is granted the _____ library to utilize the above materials in the manner most appropriate for its teaching and learning purposes, including, but not limited to reformatting and reproduction of short segments for short-term one-time use." If copyright owners are known to place restrictive conditions on the sale or use of their works, libraries could use language such as, "By the acceptance of this order, the copyright owner does not restrict the rights granted to _____ library under sections 107, 108 and 110 of Public Law 94-553."

Record Keeping

Correspondence and records of permissions should be kept routinely. A logbook organized by manufacturer or producer should record the date permissions were requested, the materials involved, the date of response, and the nature of the response. Such documentation is important to establish "reasonable effort". Permissions should include all pertinent information (see page 11, Permissions). Where a purchase order specifies an agreement to copy or reformat, a permanent record should be retained.

B. COLLECTION MAINTENANCE

Definition

This section applies to the librarian's responsibility to maintain the integrity of the library's collection and covers copying of works for preservation, security or replacement.

Pertinent sections of the law

Subsections 108(a), (b), (c), and (h) are particularly relevant to collection maintenance.

Section 108(a) specifies that reproduction of a single copy of a work for collection maintenance is legal if it (1) is not done for commercial advantage, (2) is done by a library that makes its collections available to the public or to other researchers, and (3) includes a notice of copyright.

Section 108(b) permits one facsimile reproduction of an unpublished work (including audiovisual works) solely for preservation or security or for deposit in another library only if the work is currently in the collection of the duplicating library. Facsimile copying includes microfilm or photo-duplication of printed materials.

Section 108(c) extends this right of reproduction of a copy to published works (including audiovisual works) solely for replacement of a work that is damaged, deteriorating, lost or stolen. The library, however, must first ascertain with a reasonable effort that an unused replacement cannot be obtained at a fair price.

Section 108(h) provides that except for the reproduction rights granted in subsections 108(b) and (c) libraries cannot reproduce or distribute a copy of an audiovisual work.

Common Practices

Libraries do have the right to make a copy of works for security and replacement purposes under certain conditions. However, they must have made a reasonable search for sources of replacement at a fair price. The judgment of "reasonable effort" or "fair price" will necessarily vary from situation to situation.

Routine reproductions of works in anticipation of loss or damage should not be done. Alternatives to copying must be explored. Securing permission, buying second copies, using various clearinghouses or authorized reproduction services may be acceptable choices.

Contractual obligations assumed by a library when it obtains a work take precedence over rights granted under the law. (Section 108(f)(4)). Thus, if a library agrees that it will not reproduce copies at all, it cannot do so even though the law would otherwise allow reproduction. On the other hand, if the library obtains a greater right of reproduction by contract, including rights required as a condition of purchase (see p. 5, Conditional Purchasing), those rights override the law.

Record keeping

Library collections must be maintained. The library should set up check sheets of procedures to follow when replacements are necessary. These should document that a reasonable effort was made and/or when a replacement could not be obtained at a fair price. There may be times when immediate need does not permit extensive searching. In all cases, the library should document its decisions.

C. INTERLIBRARY LOAN

Definition

Interlibrary loans (ILL) are defined by the National Interlibrary Loan Code of 1968 as "transactions in which library materials are made available by one library to another for the use of an individual; for the purposes of this code they include the provision of copies as substitutes for loans for the original materials." Definitions of a "library", "library system", or "consortium" are not given in the statute or the various guidelines. Where interpretations of the law appear difficult in the absence of definitions, librarians are urged to act on the basis of their understanding of the spirit and intent of the law and the purpose of the practice in question.

On some occasions we are borrowers and on others we are lenders, despite Polonius' advice. Our obligations under the law will differ, depending on the role we play; therefore, the relevant sections of the law are dealt with under each role.

1. The Borrowing Library

Pertinent Sections of the Law

Section 108(d) authorizes the borrowing or requesting of a single copy of a single article from a periodical issue or a copy of a small part of a copyrighted work. Where more than a single article from an issue is involved, the librarian may wish to apply the test of section 107. In order to avail itself of subsection (d) rights, the library cannot have notice that the copy would be used for any purpose other than private study, scholarship or research. In addition, the copy must become the property of the user.

Sections 108(d) and (e) require a library to post a Display Warning of Copyright at the place where ILL requests are accepted and to include the same

warning, an Order Warning of Copyright, on its in-house ILL request forms. The wording and the type size of the text and the place of display are prescribed by the Register of Copyrights by regulation (Title 17 US Code). Both the Display Warning and Order Warning of Copyright shall read:

NOTICE
WARNING CONCERNING
COPYRIGHT RESTRICTIONS

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material.

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use", that user may be liable for copyright infringement.

This institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of the copyright law.

The Display Warning of Copyright shall be printed on heavy paper or other durable material in type of at least 18 points in size, and shall be displayed prominently, in such manner and location as to be clearly visible, legible and comprehensible to a casual observer within the immediate vicinity of the place where orders are accepted.

The Order Warning of Copyright must appear on the library's in-house ILL request form itself, if filled in wholly or in part by the patron. This shall be printed within a box located prominently either on the front side of the form or immediately adjacent to the space calling for the name or signature of the person using the form. The notice shall be printed in type size no smaller than that used predominantly throughout the form, and in no case shall the type size be smaller than 8 points. The notice shall be printed in such manner as to be clearly legible, comprehensible, and readily apparent to a casual reader of the form.

Section 108(e) addresses the question of requesting a copy of most or all of a copyrighted work. This subsection authorizes such a request if 1) the copy becomes the property of the user, 2) the library has no notice the copy would be used for any purpose other than private study, scholarship or research, 3) the library has first determined on the basis of a reasonable investigation that a copy could not be obtained at a fair price, and 4) the library has displayed the Order Warning of Copyright. "Reasonable investigation" and "fair price" remain matters of judgment and circumstance.

The most significant section of the statute for borrowing libraries is section 108(g) which prohibits a lending library from 1) engaging in the related or concerted reproduction or distribution of multiple copies of the same material, whether made on one occasion or over a period of time, or 2) engaging in the systematic reproduction or distribution of single or multiple copies of material. However, the proviso to section 108(g)(2) says that nothing in this subsection prevents a library from participating in interlibrary arrangements, so long as borrowing libraries do not receive interlibrary loans in such aggregate quantities to substitute for subscriptions or purchases.

Guidelines for interpreting this proviso (Appendix C) were prepared by the National Commission on New Technological Uses of Copyrighted Works (CONTU). They represent the interpretation on which there was "substantial agreement by the principal library, publisher and author organizations." These guidelines are intended to assist in the definition of "aggregate quantities" and to clarify the application of section 108(g)(2) to libraries participating in interlibrary loan arrangements.

These guidelines are advisory, are not meant to cover every situation, and do not have the force of law. However, compliance with the guidelines is evidence of good faith.

Under the guidelines, within any calendar year, the borrowing library may receive up to five articles from any copyrighted periodical title published within the past five years prior to the date of the request. For copyrighted works other than journals, a borrowing library may receive up to 5 portions of any given work, including a collective work, during the entire period such material is protected by copyright.

The limitations stated in the guidelines do not apply if the borrowing library 1) has in force, or has entered, a subscription to the periodical, 2) owns the periodical title or other copyrighted work which it borrows because the materials are not reasonably available, or 3) the periodicals were published more than five years prior to the date the request was made. If a library owns the title or has an order in effect, the ILL request is treated as if the copy were supplied from its own collections.

The guidelines also do not apply to any publications that waive their rights to collect royalties. Many scholarly journals and many association journals, such as those of the library associations for example, permit copying for scholarly purposes without regard to copyright ownership. Any publications within the public domain are also beyond the purview of the guidelines. Many U.S. government publications are examples.

According to current U.S. Public Health Service policy, "communications in primary scientific journals publishing initial reports of original research supported in whole or in part by PHS may be copyrighted by the journal with the

understanding that individuals are authorized to make, or have made by any means available to them, without regard to the copyright of the journal, and without royalty, a single copy of any such article for their own use." (Appendix D) Since January, 1975, articles which contain a notice of National Institutes of Health (NIH) support have been indexed with the Medical Subject Heading, U.S. GOVERNMENT SUPPORTED, N.I.H. Thus, when articles are identified through MEDLINE searches it is possible to identify articles falling into this category. In many cases, however, a check of the journal article itself is necessary to establish whether the request falls outside the guidelines.

Section 108(g)(2) places certain restrictions on the requesting of interlibrary loans; however, the interlibrary loan librarian is reminded that this section should be applied in conjunction with the fair use rights granted under Section 107. Special and unusual circumstances do and could occur when exceeding the guidelines may be defensible.

Foreign publications from nations that are party to the Universal Copyright Convention are protectable under Section 104.

Common Practices

The American Library Association National Interlibrary Loan or Photocopy Request Form is recommended for use in requesting interlibrary loans. The ALA has revised this form and supplied guidelines for its use under the new law. (Appendix E)

Two abbreviations are to be used by the borrowing library. "CCG" (Conforms to Copyright Guidelines) is checked when the quantitative recommendations in the guidelines for Section 108(g)(2) (Appendix C) are followed. "CCL" (Conforms to Copyright Law) is checked when the borrowing library applied to its request section 107 or subsections of 108 other than 108(d) as qualified by 108(g)(2). In the case of an electronic transmission the name of the person authorizing the request must appear along with proper abbreviation indicating adherence to the law or the guidelines. The use of these abbreviations will be accepted by lending libraries as certification that the request is in compliance with the provisions of the law or guidelines.

Record Keeping

The CONTU guidelines require that the borrowing library retain records of requests for loans for three full years following the end of the calendar year in which the requests were made. The requirement can be met easily if the library files the completed ALA Request Forms in alphabetical order by title of journal or monograph and within title by year of publication. The library should review the files to determine its compliance with the guidelines.

2. The Lending Library

Pertinent Sections of the Law

A lending library normally assumes no legal obligations for copyright infringement liabilities when it supplies a photocopy in response to a borrowing library's certified ILL request, so long as it complies with section 108(g). A lender need not enter into a contractual agreement with a publisher in order to make photocopies for ILL purposes. The lender's rights to participate in ILL arrangements are assured under section 108. However, section 108(f)(4) says in part that the reproduction rights granted by section 108 do not override contractual obligations incurred when material is obtained. A library should take care not to enter into agreements or contracts that restrict its rights under section 108.

Under section 108(a)(3) the photocopy supplied must include a notice of copyright. The following language is recommended by CNLA:

NOTICE: THIS MATERIAL MAY BE PROTECTED BY COPYRIGHT LAW (TITLE 17, U.S. CODE)

Section 108(g)(2) accepts interlibrary loan arrangements as outside the realm of "systematic reproduction" as long as these arrangements do not substitute for subscriptions or purchases by the borrowing library.

The guidelines to section 108(g)(2) apply mainly to the borrowing library, defining the term "aggregate quantities" that would substitute for a subscription. The obligation of the lending library is to see that the borrowing library has complied with the law and/or the guidelines by accepting only those requests which have one of the two boxes (CCG, CCL) checked and which carry an authorizing signature. In the case of an electronic transmission the name of the person authorizing the request must appear along with the proper abbreviation indicating conformance to the law or the guidelines.

The lending library has the right to make isolated and unrelated reproductions of a single copy of the same materials on separate occasions so long as it is not aware or has reason to believe it is engaging in related or concerted reproduction of multiple copies.

Record Keeping

Although lending libraries often retain for routine management purposes records of interlibrary loan

requests received, there is no requirement to do so under the law or guidelines. To facilitate the Register of Copyrights' five year review, lending libraries should document problems encountered in following the law and guidelines.

D. PHOTOCOPY SERVICES

1. Unsupervised photocopy services

An unsupervised photocopy service is one in which the library provides coin, key or other self-service operated machines on its premises but does not exercise control over the materials photocopied. In this situation the library staff is only responsible for maintaining the equipment and collecting fees for the number of pages copied.

Section 108(f) protects the library and its employees from liability for copyright infringement that results from the unsupervised use of reproducing equipment located in the library, if the equipment displays a notice that the making of a copy may be subject to the copyright law. This is the extent of the library's responsibility.

2. Supervised photocopy services

A supervised photocopy service is one in which employees of a library produce photocopies of their library's materials on the library's equipment at the request of individual patrons.

The making of multiple copies for reserve collections or for faculty for classroom use is most often done by the library's supervised photocopy services. Section 107 and the guidelines that cover this type of copying are discussed under E. Reserve Collection, p. 10

Section 108(a) states that employees acting within the scope of their employment may reproduce one copy of a work, or distribute such a copy if: 1) the reproduction is made without any purpose of direct or indirect commercial advantage; 2) the collections of the library are open to the public or at least to researchers not affiliated with the institution of which the library is a part; and 3) the reproduction of the work includes a notice of copyright.

Section 108(d) permits the library, at the request of the user, to make a single copy of no more than one article or other contribution to a copyrighted collection or periodical issue, or of a small part of any other copyrighted work. Copies made under section 108(d) must become the property of the user, and the library should have no notice that it will be used for any purpose other than private study, scholarship or research. This "one article" rule means that requests in excess of a single copy must be justified under the general rule of "fair use".

The library must also prominently display at the place where orders are accepted, and include on its order forms, a warning of copyright as prescribed by the Register of Copyrights.

The language of the warning of copyright for both the display and order forms shall read:

NOTICE
WARNING CONCERNING
COPYRIGHT RESTRICTIONS

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material.

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use", that user may be liable for copyright infringement.

This institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of copyright law

The Display Warning must be printed on heavy paper or other durable material in type at least 18 points in size, and displayed prominently in such manner and location as to be clearly visible, legible and comprehensible to a casual observer within the immediate vicinity of the place where photocopy orders are placed.

If the library uses photocopy request order forms, each form must carry the Order Warning of Copyright printed within a box located on the order form itself, either on the front side of the form or adjacent to the space calling for the name or signature of the person using the form. The notice must be printed in type size no smaller than 8 points. The notice must be printed in such manner as to be clearly legible, comprehensible, and readily apparent to a casual reader of the form

Section 108(e) allows the library to photocopy an entire work in its collection at the request of a user under the same two conditions outlined in section 108(d); however, the library must first determine on the basis of a reasonable investigation that a copy of the work cannot be obtained at a fair price. These efforts may include searching common trade sources.

The isolated and unrelated reproduction of a single copy of the same material on separate occasions granted under sections 108(a), (d), and (e) discussed above are modified by section 108(g). Under section 108(g)(1) the library may not make a single copy if it is aware or has substantial reason to believe that it is engaged in the related or concerted reproduction of multiple copies of the same material, whether made on one occasion or over a period of time, and whether intended for aggregate use by one or more individuals or for separate use by individuals of a group. Under section 108(g)(2) libraries may not engage in the systematic reproduction or

distribution of single or multiple copies, but nothing in this clause prevents interlibrary loan arrangements.

For the convenience of its patrons, the library should publicize its photocopying policies and clearly define instances where photocopying cannot be done under the law.

Record Keeping

Libraries normally compile data on the uses made of their photocopy services. This data may be useful for future review and modification of the law.

E. RESERVE COLLECTION

Definition

Many academic libraries ensure access to required reading materials for entire classes of students through reserve collections. Reserve lists supplied by the faculty usually consist of books and journal articles.

Pertinent Sections of the Law

Entire books rarely present copyright problems because the library usually provides one or more copies of the book rather than photocopies of it. However, copyright problems are created when faculty members ask for multiple copies of journal articles or small portions of monographs.

Section 108 does not affect Reserve Collections.

Section 107 specifically states that reproduction of a copyrighted work for teaching, including multiple copies for classroom use, is not an infringement of copyright if the particular case constitutes fair use. Four factors must be considered in determining whether a particular case is fair use: 1) the purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes; 2) the nature of the copyrighted work; 3) the amount and the substantiality of the portion used in relation to the copyrighted work as a whole; and 4) the effect of the use upon the potential market for or the value of the copyrighted work. An interpretation of fair use in educational situations ("Agreement on Guidelines for Classroom Copying in Not-for-Profit Educational Institutions, with Respect to Books and Periodicals") (Appendix B) was drawn up by representatives of authors and publishers, educators and librarians. It should be stressed that the purpose of the guidelines is to state the *minimum* and not the maximum standards of educational fair use. The guidelines are not intended to limit the types of copying that are permitted under the standards of fair use and may be subject to changes in the future.

Under the guidelines, multiple copies may be made by or for the teacher for classroom use or discussion if the copying meets the tests for "brevity", "spontaneity", and "cumulative effect", and if each copy includes a notice of copyright.

Brevity is defined as either a complete article, story or essay of less than 2,500 words or an excerpt from any prose work of not more than 1,000 words or 10% of the work, whichever is less; but a minimum of 500 words is allowed in all circumstances. For example, in a work of 800 words, the guidelines will permit 500 words to be excerpted even though this amounts to over 60% of the work.

To meet the test of spontaneity the copying must be done at the request of the teacher and the decision to use the copyrighted work must be so close to the time needed that it would be unreasonable to expect a timely reply to a request for permission to copy from the work.

To meet the cumulative effect test: 1) the material copied must be for only one course in the school; 2) not more than one short poem, article, story, essay or two excerpts may be copied from the same author, nor more than three from the same collective work or periodical volume during one class term; and 3) there shall not be more than nine instances of multiple copying for one course during one class term.

Part three of the guidelines specifically prohibits the following: 1) copying used to create, replace or substitute for anthologies, compilations or collective works; 2) copying of consumable materials, such as workbooks, exercises and standardized tests; 3) copying used to substitute for the purchase of books, periodicals or publisher's reprints; 4) copying directed by "higher authority", such as the head of the school system; and 5) repeated copying of the same item for the same teacher from term to term.

Common Practices

Every library must evaluate its present reserve room practices and determine whether they meet the criteria for educational fair use under section 107.

Reserve collections often exist because providing a copy for all members of a class would be prohibitively expensive or unreasonable. Suppose all tests for the guidelines are met: still, making 100 copies of a 3-page article for 100 students would be unreasonable and impractical; but, making 10 copies accessible to the same number of students for classroom purposes through a reserve collection is practical, reasonable and defensible under section 107.

Faced with going beyond the guidelines, there are several options for either the reserve librarian or the faculty member: 1) ask for permission from the copyright holder to copy the materials; 2) request

reprints from the authors; 3) buy extra issues of the journals containing the articles; or 4) purchase the needed copies from a licensed document delivery service.

Record Keeping

For future review and modification of the law and guidelines, reserve collection librarians should compile data on how their practices have been modified by the new law. Examples of useful types of information include: 1) lists of former practices believed to be prohibited by the law; 2) the number of times items were not placed on reserve because to do so would exceed fair use; 3) the types of alternatives used, the number of times each was used, and the estimated cost in time and in money for each instance.

V. INFRINGEMENT

To violate the rights of the copyright owner as defined in the law is to infringe copyright. The copyright owner may recover actual or statutory damages, court costs, and attorney's fees. Criminal infringement, a willful infringement for commercial advantage or private financial gain, is subject to a fine and/or imprisonment. See sections 504 and 506(a), Appendix A. Statutory damages (but not actual monetary damages or court costs and attorneys' fees) are to be waived entirely for a library or nonprofit educational institution when the institution or one of its employees acting within the scope of his or her employment "believed or had reasonable grounds for believing that his or her use of the copyrighted work was a fair use under section 107 . . ."

VI. PERMISSIONS

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b. Form of distribution and disposal (reserve collection, classroom)

VII. REFERENCES AND RECOMMENDED READING LIST

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